



Report of the 2nd Session of the IALA AtoN Requirements and Management (ARM) Committee 25 to 29 May 2015

Executive Summary

43 members from 23 countries and one sister organisation participated in ARM2; 4 for the first time;

This was the second meeting for the 2014-18 Work Programme and the ARM Committee considered 28 input papers and produced 11 output papers;

Key outputs included:

Preparation of liaison notes to Council including:

- Advise on updating the ARM Work Programme (2014-2018);
- Advice on ARM meetings away from IALA HQ;
- Seeking approval to conduct a Workshop on AIS AtoN developments and their uses in October 2016 back-to-back with ARM5.

Preparation of a liaison note and output to PAP including:

- The new IALA document structure;
- Control sheet external liaison.

Preparation of liaison notes to all Committees including:

- The update of the IALA NAVGUIDE;
- Disaster Recovery Planning.

Preparation of a liaison note to ENAV on the ARM contribution to e-Navigation developments.

Preparation of a liaison note to ENG on the update on Audible signals in the NAVGUIDE.

The ARM Committee members made a significant contribution to the IALA Wiki during ARM2. Particular efforts of David Hayes made this possible.

All Members are kindly requested to send photographs for inclusion in the next edition of the IALA NAVGUIDE.

Table of Contents

1	Introduction	4
1.1	Administrative announcements	5
1.2	Approval of the agenda	5
1.3	Introductions and apologies	5
1.4	Programme for the week	5
2	Review of Action Items from ARM1	5
2.1	Action Items – IALA Secretariat	5
2.2	Action Items – ARM Committee Members	5
3	Review of input papers	5
4	Reports from other bodies	5
4.1	IALA Council	5
4.2	IALA Policy Advisory Panel	6
4.3	IMO	6
5	Reports from Rapporteurs	6
5.1	Marine Spatial Planning	6
5.2	e-Navigation - shore side	6
5.3	e-Navigation – shipborne side	6
5.4	IALA Bulletin	6
6	Presentations	7
6.1	IALA World-Wide Academy (WWA)	7
6.2	Methodology update of the Canadian Coast Guard	7
6.3	Dublin Bay Digital Diamond	7
6.4	Development of the Lighthouse Authorities of the Russian Federation	8
6.5	IALA Wiki	8
7	Establish Working Groups	8
8	Working Group 1 – Navigational Requirements (WG1)	8
8.1	Develop a standard for the provision of AtoN (Task 1.1.1.)	8
8.2	Develop guidance for AtoN authorities on disaster recovery (Task 2.1.1.)	8
8.3	Develop guidance for AtoN authorities on the use of Marine Spatial Planning (Task 3.1.1.)	9
8.4	Input Papers reviewed by Working Group No. 1	9
8.5	Develop a global recommendation on the marking of wrecks (New Task 1.1.3)	9
9	Working Group 2 – Continuous Improvement (WG2)	9
9.1	Develop guidance on the management of AtoN in environmentally protected areas (Task 2.5.1)	10
9.2	Control sheet on committee external liaison	11

9.3	Develop IALA committee guidance to support the new document structure implementation (Task 4.2.1)	11
9.4	Coordinate a limited review of the IALA NAVGUIDE to incorporate amended recommendations and guidelines and other necessary update via IALA Wiki (Task 4.2.2)	11
9.5	Revise ARM documents once IALA Wiki populated (Task4.2.4)	12
9.6	Amend IALA Dictionary as appropriate including harmonisation of definition of AtoN (Task 4.2.5)	12
9.7	Amendments to the ARM Work Program	12
9.8	Input Papers reviewed by Working Group 2	12
10	Review of Current Work Programme (2014 – 2018)	13
11	Review of output and working papers	13
12	Any Other Business	13
12.1	PIANC meeting	13
13	Review of session report	13
14	Date and venue of next meeting	13
15	Closing of the Meeting	13
16	List of Annexes	14
ANNEX A	ARM2 Committee Agenda	15
ANNEX B	ARM2 Participants	17
ANNEX C	Working Group Participants	24
ANNEX D	List of input papers	26
ANNEX E	List of Output and Working Papers	28
ANNEX F	Action Items	29



Report of the 2nd Session of the IALA AtoN Requirements and Management (ARM) Committee 25 to 29 May 2015

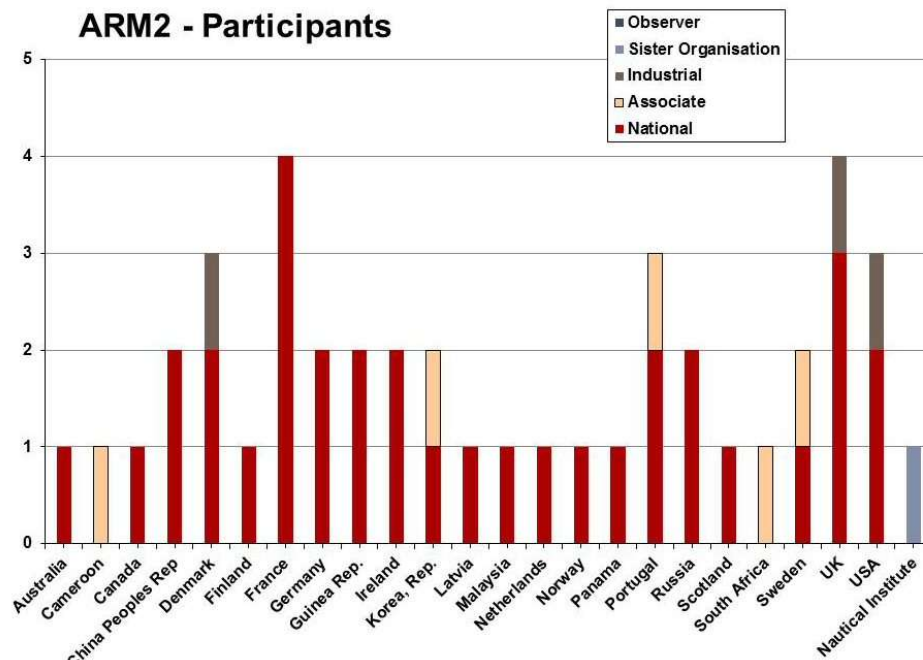
ARM Committee
2nd Session

Saint Germain en Laye, France
29 May 2015

1 Introduction

The 2nd meeting of the **ARM Committee** was held from 25 to 29 May 2015 at IALA.

The Chairman was Phil Day and Michael Skov was Vice Chairman. The Secretary for the meeting was Wim van der Heijden. 43 members from 23 countries and one sister organisation participated in ARM2; 4 for the first time.



The Chairman opened the meeting by welcoming all participants to ARM2 being the second session of the working period 2014-2018 with a special welcome to members participating for the first time.



1.1 Administrative announcements

Virginia Butler gave a Safety Briefing and some information for lunches and coffee breaks for which she was thanked by the Chairman.

1.2 Approval of the agenda

The agenda was reviewed and adopted (ARM2-1.2).

1.3 Introductions and apologies

Individual Committee members were asked to introduce themselves.

The Committee noted apologies from members who were unable to attend as noted in ANNEX B.

1.4 Programme for the week

The Chairman explained the programme for the week (ARM2-1.4). Members were advised that there will not be a plenary session on Tuesday and the Working Groups will start at 09:00. Depending on the output, the plenary session on Thursday may start at 16:00.

2 Review of Action Items from ARM1

Input paper ARM2-2.1 refers.

2.1 Action Items – IALA Secretariat

It was noted that all IALA Secretariat actions from ARM1 had been completed.

2.2 Action Items – ARM Committee Members

It was noted that no photographs for the revision of the NAVGUIDE had been received. The Secretary was asked to send a reminder to National Members to submit high resolution photographs by e-mail, CD or other means for the next edition of the NAVGUIDE. ARM Committee members are reminded to supply photographs for the NAVGUIDE.

All other actions had been completed.

Action Item

*The **Secretariat** is requested to invite National Members for the submission of photographs for the next edition of the NAVGUIDE.*

***ARM members** are requested for the submission of photographs for the next edition of the NAVGUIDE.*

3 Review of input papers

The list of input papers is automatically generated by the IALA web site when downloading one or more documents. Input papers are numbered in line with the agenda.

The input papers were reviewed and appointed to the working groups.

4 Reports from other bodies

4.1 IALA Council

The Committee noted the following Council report:

- 59th Session, IALA HQ, 9-10 December 2014, paper ARM2-4.1.1 refers.

There were no ARM specific issues reported because ARM1 was too close to C59.

4.2 IALA Policy Advisory Panel

The Committee noted the following PAP report:

- PAP ad-hoc meeting, Rotterdam, the Netherlands, 18 February 2015, paper ARM2-4.2.1 refers.

The Chairman informed that because of the new documents policy of IALA a scheme was made with high level Standards and the underlying fields of interest which can contain Recommendations and Guidelines. The framework of the Standards will be drafted by the IALA Secretariat, committees will be asked to complete the technical details later on.

4.3 IMO

The Committee noted the following report of IMO:

- MSC94, November 2014, paper ARM2-4.3.1 refers.

5 Reports from Rapporteurs

5.1 Marine Spatial Planning

Rapporteur: George Detweiler

Paper ARM2-5.1 refers (presentation)

The rapporteur presented the activities in the United States on marine planning with a focus on the bodies involved and Recommendations from the Interagency Task Force. Based on this, marine planning has been defined on different levels. The challenges and benefits were highlighted. He concluded to say that marine planning is a voluntary regional process.

5.2 e-Navigation - shore side

Rapporteur: Gerry Brine

Paper ARM2-5.2 refers (presentation)

The rapporteur reported about the developments in IMO with respect to the e-Navigation Strategy Implementation Plan. He also informed about the outcomes of ENAV16 with respect to test beds, VDES and Maritime Service Portfolios. He showed a maritime infrastructure framework and ended with the conclusions of the conference 'e-Navigation Underway 2015'.

5.3 e-Navigation – shipborne side

Rapporteur: Harold McClenahan

Paper ARM2-5.3 refers (presentation)

The rapporteur informed about the e-Navigation Strategy Implementation Plan and the consequences for the ship's bridge design. Main issues are user friendly design, automated reporting, improved reliability, integration of information and improved communication. This will result in the bridge of the future with besides available systems, new functions should have incorporated. He showed examples of future bridges in which e.g. augmented reality will play a role. Other elements are Tactical Route Information and Decision Support Tools. Some movies illustrate future bridge design (links to the movies can be found in the referred paper).

5.4 IALA Bulletin

Rapporteur: Michael Skov

There were no special contributions during the reporting period. The rapporteur asked for ARM related contributions by the Members for a future ARM theme issue of the bulletin including previously published articles from members.

6 Presentations

6.1 IALA World-Wide Academy (WWA)

Paper ARM2-6.1 (presentation) refers.

The presentation was made by Gerardine Delanoye, the new Programme Manager of the WWA. She introduced herself briefly.

The presentation covered:

- The new Master plan and the targets for 2015;
- The WWA activities since ARM1;
- The planned activities of the WWA in 2015;
- AtoN training and accreditation;
- The status of Member states with AtoN Accredited Training Organisations;
- The ongoing revision of Model Courses.

6.2 Methodology update of the Canadian Coast Guard

Paper ARM2-6.2 (presentation) refers.

The presentation was given by Scott Windover. It covered three areas of modernisation because of ongoing developments of technology.

- Navigation Risk Identification Module (NRIM);
- Modernisation of positional uncertainty;
- Re-definition of user categories in Long-range, Short-range and Local vessels.

6.3 Dublin Bay Digital Diamond

Paper ARM2-6.3 (presentation) refers.

Harold McClenahan presented an update of this e-navigation demonstrator project.

It covered:

- WiFi coverage in the Dublin Bay;
- The Dublin Bay Buoy which measures and communicates a number of water parameters;
- SMS service to a shipping agent to improve service;
- Kish Tower webcam service which users gives a view on the sea condition;
- Spar buoy trial which will be compared with a standard buoy;
- Stereoscopic positioning to match at a particular bearing;
- The use of differential e-Loran to improve accuracy;
- Port traffic counter to record passing traffic.

Some new developments were also presented. Members were attended on the publication and distribution of “e-Nav News”. Three issues have been published now.

6.4 Development of the Lighthouse Authorities of the Russian Federation

Paper ARM2-6.4 (presentation) refers.

Andrey Oleynikov gave an overview of the current status of AtoN in Russia. This includes:

- The actual status of AtoN's both fixed and floating;
- The development of control and correction stations for GLONASS;
- The development of radio technical navigation aids for the northern passage was highlighted.

6.5 IALA Wiki

David Hayes gave a brief presentation on the use of IALA Wiki. He demonstrated how to input information to the ARM section and asked members to do some exercises during the week. For that reason he joined the meeting for the entire week to assist members to input and edit information in various sections of the IALA Wiki.

The Chairman thanked all speakers for the presentations which are available on the ARM2 page in the Committee section of the IALA web-site.

7 Establish Working Groups

The Chairman outlined the procedure to be followed by working groups, including the associated paperwork, after which two working groups were established and their tasks outlined. A list of working group participants is at Annex C.

Working Group (WG)	Working Group Chairman / Vice Chairman
WG1 – Navigational Requirements	Roger Barker / Jorge Teles
WG2 – Continuous Improvement	Gerry Brine / Guttorm Tomren (acting Vice Chair)

8 Working Group 1 – Navigational Requirements (WG1)

The WG commenced its work by reviewing the agenda items and tasks assigned. The Chair provided clarification on what work needed to be developed at ARM 2.

8.1 Develop a standard for the provision of AtoN (Task 1.1.1.)

Task Leader: Roger Barker

Following the decision from Council that IALA Standards will be developed by IALA Secretariat, the committee's work plan proposes to change the description of Task 1.1.1 into "Contribute to Standards generated by Secretariat". Therefore this task is pending until ARM input will be required.

8.2 Develop guidance for AtoN authorities on disaster recovery (Task 2.1.1.)

Task Leader: Alfredo Dominguez

Work progressed in the development of the guideline. The draft version of the document is ready (ARM2-11.2.1) and will be revisited at ARM3 to consolidate and produce the final version.

Action Item

*The **Secretariat** is requested to forward working paper ARM2-11.2.1 to ARM3.*

8.3 Develop guidance for AtoN authorities on the use of Marine Spatial Planning (Task 3.1.1.)

Task Leader: Ernst Bolt

Work continued on the development of the guideline, resulting in a working paper (ARM2-11.2.2) to be carried forward to the next session.

Action Item

*The **Secretariat** is requested to forward working paper ARM2-11.2.2 to ARM3.*

8.4 Input Papers reviewed by Working Group No. 1

The Working Group reviewed several input papers and produced 3 Liaison Notes:

- Liaison Note to the ENAV Committee on the ARM input to the e-Navigation developments (ARM2-11.1.4);
- Liaison Note to the ENG Committee on audible signal information on the NAVGUIDE (ARM2-11.1.3);
- Liaison Note to ENG, ENAV and VTS Committees on Disaster Recovery (ARM2-11.1.5).

Action items

*The **Secretariat** is requested to forward the Liaison Note on the ARM input to the e-Navigation Committee (ARM2-11.1.4) to the ENAV Committee to consider and to the ENG and VTS Committees to note.*

*The **Secretariat** is requested to forward the Liaison Note on audible signal information on the NAVGUIDE (ARM2-11.1.3) to the ENG Committee.*

*The **Secretariat** is requested to forward the Liaison Note on Disaster Recovery (ARM2-11.1.5) to the ENG, ENAV and VTS Committees.*

8.5 Develop a global recommendation on the marking of wrecks (New Task 1.1.3)

Task Leader: Jorge Teles

The WG discussed the developments regarding the challenges faced by the national authorities on the subject of the marking of wrecks, and proposed a new work item to encompass the existing recommendations on the marking of wrecks.

Action Item

*The **Secretariat** is requested to forward working paper ARM2-11.2.3 to ARM3.*

9 Working Group 2 – Continuous Improvement (WG2)

The WG contained 16 members of whom 3 were attending an IALA Committee meeting for the first time. The WG was very productive, producing 3 output papers for submission to Council and to the other Committees and 1 working paper for input to ARM3.

The Chair provided a brief overview of the objectives for this meeting and the input papers were reviewed.

The Chair advised that the priority tasks for the WG2 at ARM2 were:

- To progress the development of guidance on the management of AtoN in environmentally protected areas. (Task 2.5.1)
- Develop guidance on the new IALA document structure following the Council approval of the 6 categories for future IALA standards (Task 4.2.1)
- Develop guidance to IALA Committees (via PAP) regarding revising of the IALA NAVGUIDE including use of IALA Wiki. (Task 4.2.2, Task 4.2.3)

The WG established new task groups to progress individual agenda items. Task leaders were as follows:

- Martin Bransby (Task 1.2.1 – Populate S-100 as requested by ENAV Committee).
- Gaelle Nassif (Task 2.5.1 - Develop guidance on the management of AtoN in environmentally protected areas).
- Gerry Brine (Task 4.1.1 - Develop control sheet on committee external liaison).
- Martin Bransby (Task 4.2.1 – Develop IALA committee guidance to support the new document structure implementation).
- John Stone (Task 4.2.2 – Coordinate a limited review of the IALA NAVGUIDE to incorporate amended recommendations and guidelines and other necessary updates via Wiki).
- Martin Bransby (Task 4.2.3 – Liaise with committees regarding applying the new IALA document structure).
- Guttorm Tomren (Task 4.2.4 – Revise ARM documents once IALA Wiki populated).

9.1 Develop guidance on the management of AtoN in environmentally protected areas (Task 2.5.1)

Task Leader: Gaelle Nassif

Assisted by: Dave Kelleher, Scott Windover, Jeon Minsu

Task has continued at ARM2. Two input papers were submitted, ARM2-9.2.1 and ARM2-9.2.2. ARM members were requested to provide input on issues and best practice prior to ARM2 to enable the scope of the guideline to be accurately specified early in the drafting process. An analysis was undertaken on the need to determine whether the required guidance could be best achieved by a new guideline or by refining the existing IALA Guideline 1036.

The WG concluded that the issue of managing AtoN's in environmentally protected areas warranted a separate guideline to the existing IALA Guideline 1036 on Environment Management in Aids to Navigation. It also concluded that IALA Guideline 1036 required amendment itself to better reflect challenges to, and the practices and processes that must be undertaken, to ensure the proper function of the AtoN and at the same time address environmental issues, such as avoiding waste pollution, habitat/environmental survey, minimizing environmental footprint etc. In line with the new IALA document structure, a new overarching Recommendation on environmental management in AtoN also needs to be developed.

A comprehensive scoping of the structure and potential topics for the new guideline was developed as a working paper to take forward to ARM3.

Action item:

The Secretariat is requested to forward working paper ARM2-11.2.5 to ARM3.

9.2 Control sheet on committee external liaison

Task Leader: Dave Kelleher Assisted by: John Stone

The control sheet developed at ARM1 meeting ARM2-9.3.1 (reference ARM1-11.1.10) was updated following review of input and output papers of recent Committee and Council meetings held since ARM1. The WG considers that the current process for identifying incoming and outgoing correspondence requires improvement by way of each Committee and Council report including the information that ARM requires to update the control sheet in their Committee reports (ARM2-11.1.9).

Action item:

The Secretariat is requested to forward Output Paper ARM 2-11.1.9 Control sheet on committee external liaison to PAP.

9.3 Develop IALA committee guidance to support the new document structure implementation (Task 4.2.1)

Task Leader: Martin Bransby Assisted by: Gerry Brine, Guttorm Tomren, Cathrine Steensberg, Deidre Lane.

The input paper from the Feb 2015 PAP meeting on the proposed new IALA document structure was reviewed. The current ARM documents were mapped to the new structure. Slightly revised definitions for Standards, Recommendations and Guidelines were also developed.

A liaison note to PAP was developed seeking approval of proposed instructions to IALA Committees to be adopted in reviewing, updating and creating new guidance aligned with the new IALA document structure (ARM2-11.1.8).

Action item:

The Secretariat is requested to forward the Liaison Note on New IALA Documentation Model (ARM2-11.1.8) to the PAP.

9.4 Coordinate a limited review of the IALA NAVGUIDE to incorporate amended recommendations and guidelines and other necessary update via IALA Wiki (Task 4.2.2)

Task leader: John Stone Assisted by: Johan Westerlund, Christian Herrlich, Donggen Luo, Arlindo Santos, Jose Luis, Andrey Oleynikov

A proposed approach was developed to amending / updating the NAVGUIDE to ensure consistency in terms of level of detail of information and avoiding unnecessary duplication with other IALA documentation. In particular the use of an 'executive summary' approach is proposed in order to reduce the duplication with the detailed information contained in IALA guidelines.

The tracking table for the NAVGUIDE was updated (ARM2-11.2.4).

IALA Wiki training was undertaken by most task group members to facilitate efficient updating of documents in ARM2 and in future ARM Committee meetings. The WG members would like to thank David Hayes (Trinity House) for his assistance in providing the training.

The Group also began amending ARM sections of the IALA NAVGUIDE using the new approach.

Action items:

*The **Secretariat** is requested to forward the Liaison Note on the NAVGUIDE ARM2-11.1.7 to PAP and if approved, circulate to all committees prior to the October / November 2015 round of meetings.*

9.5 Revise ARM documents once IALA Wiki populated (Task4.2.4)

Revision to commence from ARM3 after PAP has considered new document structure.

9.6 Amend IALA Dictionary as appropriate including harmonisation of definition of AtoN (Task 4.2.5)

Task Leader: Bob Trainor Assisted by: Johan Westerlund

Due to higher priority tasks and the absence of the task leader, no work was able to be done on this task at ARM2.

Task to be undertaken over the 2014-2018 Work Programme.

Action item

ARM members are requested to provide changes to the IALA Dictionary to the task leader prior to ARM3.

9.7 Amendments to the ARM Work Program

A number of titles of work tasks were refined to better reflect the nature and intent of the task.

The following task which emanated from the review of the MBS was restored to the work program as agreed at ARM1. Minsu Jeon will be the Task Leader and he developed a working paper for input to ARM3 which provided a scoping of the proposed guideline (ARM2-11.2.6).

Action item

*The **Secretariat** is requested to forward the working paper ARM2-11.2.6 to ARM 3.*

9.8 Input Papers reviewed by Working Group 2

The following input papers, not directly linked to ARM work program tasks, were also reviewed:

- ARM2-9.4.6 Information Paper from ENG2 on Audible Signals

Task Leader: John Stone

WG1 reviewed the input paper and endorsed the proposed reduction in range for audible signals from 2nm to 1nm and the reduction in range of backup audible signals from 0.5nm to 0.2nm. WG2 reflected these changes in the NAVGUIDE.

- ARM2-9.8.1 Liaison Note from ENAV regarding S-200 Product Specification

ENAV response was judged to have addressed ARM1 inquiry adequately and no further action was needed.

10 Review of Current Work Programme (2014 – 2018)

Input paper ARM2-10.1 refers.

The current Work Programme was reviewed and updated during the meeting. Some descriptions have been completed and five new tasks are added to the Work Programme. The updated version will be available as ARM2-10.2 on the ARM2 section of the IALA web.

Action items

*The **Secretariat** is requested to forward the updated version of ARM2-10.2 to Council and make it input for ARM3.*

*The **Secretariat** is requested to forward the Liaison note (ARM2-11.1.6) on the update of the current Work Programme to Council to approve ARM2-10.2.*

11 Review of output and working papers

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

The output documents listed at Annex E were reviewed and agreed.

The Secretariat was requested to forward the output documents, as indicated earlier in the report.

The Chairman then thanked the Chairs, Vice Chairs and members of the working groups for all their efforts during the week.

12 Any Other Business

12.1 PIANC meeting

In parallel with ARM2 a PIANC WG 161 meeting on 26 and 27 May took place which was complementary with the Marine Spatial Planning work of WG 1.

13 Review of session report

The report of the meeting (ARM2-13) was reviewed and approved by the Committee on the 29th May 2015.

Action Item

*The **Secretariat** is requested to forward the report of ARM2 (ARM2-13) after completion (deadline 15 June 2015) to the IALA Council, to note.*

14 Date and venue of next meeting

ARM3 is expected to meet from 23 – 27 November 2015 at IALA HQ.

15 Closing of the Meeting

The Chairman again expressed his thanks for all the hard work done during the meeting.

The Chairman then asked if there were any final comments that members wished to make; there were none, at which he wished everyone a pleasant and safe journey home.

16 List of Annexes

- 1 Agenda
A copy of the agenda is at Annex A.
- 2 Participants
A list of participants is at Annex B.
- 3 Working Group Participants
A list of working group participants is at Annex C.
- 4 Input Papers
A list of input papers is at Annex D.
- 5 Output and Working papers
A list of output and working papers is at Annex E.
- 6 Action Items
A list of action items is at Annex F.

ANNEX A ARM2 COMMITTEE AGENDA

2nd Meeting of the AtoN Requirements and Management (ARM) Committee

The 2nd meeting of the **ARM Committee** will be held from 25 – 29 May 2015, at IALA, St Germain en Laye, France.

The opening plenary will commence at 1300 on Monday 25 May, and the closing plenary will end at approximately 1300 on Friday 29 May.

Committee Chair, Vice-Chair and Working Group Chairpersons are requested to meet at 0900 on Monday 25 May.

AGENDA

1. Introduction
 - 1.1. Administration and Safety Briefing
 - 1.2. Approval of agenda
 - 1.3. Apologies and introductions
 - 1.4. Programme for the week
2. Review of action items from last meeting
 - 2.1. Review of action items from ARM1
 - 2.2. Final Report from ARM1 - for reference
3. Review of input papers
 - 3.1. Input papers
4. Reports from other bodies:
 - 4.1. IALA Council
 - 59th Session 10 December 2014
 - 4.2. IALA Policy Advisory Panel
 - PAP ad-hoc meeting, Rotterdam, the Netherlands, 18 February 2015
 - 4.3. IMO
 - MSC94, November 2014
5. Reports from rapporteurs:

• Marine Spatial Planning	George Detweiler
• e-Navigation shore side	Gerry Brine
• e-Navigation shipborne side	Harold McClenahan
• IALA Bulletin	Michael Skov

6. Presentations (15 minutes)
 - WWA update Gerardine Delanoy
 - Design and review methodology in Canada Scott Windover
 - Dublin Bay Digital Diamond Harold McClenahan
 - Development of the Lighthouse authorities of the Russian Federation
Andrey Oleynikov
 - Update IALA Wiki David Hayes
7. Establish Working Groups
8. WG1- Navigational requirements
 - 8.1. Develop a standard for the provision of AtoN (Task 1.1.1)
 - 8.2. Develop guidance for AtoN authorities on disaster recovery (Task 2.1.1)
 - 8.3. Develop guidance for AtoN authorities on the use of Marine Spatial Planning (Task 3.1.1)
9. WG2 – Continuous improvement
 - 9.1. Develop a standard for the management of AtoN (Task 2.1.2)
 - 9.2. Develop guidance on the management of AtoN in environmentally protected areas (Task 2.5.1)
 - 9.3. Develop control sheet on committee external liaison (Task 4.1.1)
 - 9.4. Populate IALA Wiki with all ARM owned documents including MBS and NAVGUIDE (Task 4.2.1)
 - 9.5. Liaise with committees regarding population of Wiki, workplans and document pyramid (Task 4.2.2)
 - 9.6. Revise ARM documents once Wiki populated (Task 4.2.3)
 - 9.7. Amend IALA Dictionary as appropriate including harmonisation of definition of AtoN (Task 4.2.4)
10. Review of Current Work Programme (2014 – 2018)
11. Review of output and working papers
 - 11.1. Output papers
 - 11.2. Working papers
12. Any Other Business
13. Review of session report
14. Date and venue of next meeting
15. Close of the meeting

ANNEX B ARM2 PARTICIPANTS**Country****Australia Australian Maritime Safety Authority**

Mr Gerry BRINE

Phone +61 2 6279 5049
 Mobile phone: +61 408 769 400
 e-mail (main): gerry.brine@amsa.gov.au
 e-mail (alternative): gerrybrine@gmail.com

Cameroon Autorité Portuaire Nationale

Mrs Nadine EPARA

Phone +237 77 76 53 55
 e-mail (main): nadineepara@yahoo.fr

Canada Canadian Coast Guard

Mr Scott WINDOVER

Phone +1 613 991 0477
 e-mail (main): scott.windover@dfo-mpo.gc.ca

China China Maritime Safety Administration**(People's Republic of)** Mr Donggen LUO
China Maritime Safety Administration
 Mr Rongwei LANG

Phone +86 22 5887 3971
 Mobile phone: +86 18920280829
 e-mail (main): captain_eric@sohu.com

Denmark Danish Maritime Authority

Mr. Jakob BANG

Phone + 45 91 37 61 73
 Mobile phone: +45 20 52 85 41
 e-mail (main): cjb@dma.dk

Danish Maritime Authority

Mr. Michael SKOV

Phone + 45 91 37 61 71
 Mobile phone: + 45 20 53 25 84
 e-mail (main): msk@dma.dk

Denmark**Force Technology**

Ms. Cathrine STEENBERG

Phone +45 72 15 77 96
 Mobile phone: +45 22 69 72 96
 e-mail (main): cms@force.dk

Finland**Finnish Transport Agency**

Mr. Risto LANG

Phone +358 295 34 3342
 Mobile phone: +358 40 829 3962
 e-mail (main): risto.lang@fta.fi

France**CEREMA**

Ms Gaëlle NASSIF

Phone +33 2 98 05 67 72
 e-mail (main): gaelle.nassif@cerema.fr

Cerema/DtechEMF/DT

Mr. Jean-Charles CORNILLLOU

Phone +33 2 98 05 67 41
 Mobile phone: +33 6 61 94 26 70
 e-mail (main): jean-charles.cornillou@cerema.fr

Direction des Affaires Maritimes

M. Jean-Luc FONTAN

Phone + 33 (0)1 40 81 62 86
 Mobile phone: + 33 6 73 34 17 99
 e-mail (main): jean-luc.fontan@developpement-durable.gouv.fr

MEEDTL-DGITM-DAM

Mr. Vincent BRUGER

Phone +33 1 40 81 20 46
 Mobile phone: +33 6 72 19 11 57
 e-mail (main): Vincent.Bruger@developpement-durable.gouv.fr

Germany**Federal Waterways & Shipping Administration**

Mr. Christian HERRLICH

Phone +49 4852 885 497
 Mobile phone: +49 160 9091 2436
 e-mail (main): Christian.Herrlich@wsv.bund.de

Germany **Federal Waterways & Shipping Agency**
 Mr. Gerhard MUELLER-HAGEN

Mobile phone: +49 4502 847 5510
 e-mail (main): Gerhard.Mueller-Hagen@wsv.bund.de

Guinea **Ministère des Transports - ANAM**
(Republic of) Mr Mamadou Alpha BALDE

Phone +224 66 49 14 762
 Mobile phone: +224 66 49 14 762
 e-mail (main): alphabaguire@yahoo.fr
 e-mail (alternative): alphabaguire28@gmail.com

Ministère des Transports - ANAM
 Mr Cécé Urbain LAMA

Phone +224 664 43 1485
 Mobile phone: +224 657 56 17 51
 e-mail (main): lamaccurbain@yahoo.fr

Ireland **Commissioners of Irish Lights**
 Capt Harold McCLENAHAN

Phone +353 1 27 15 542
 Mobile phone: +353 868 201 435
 e-mail (main): h.mcclenahan@cil.ie

Commissioners of Irish Lights
 Ms Deirdre LANE

Phone +353 31 271 55 43
 e-mail (main): deirdre.lane@cil.ie

Korea **Korean Association of Aids to Navigation**
(Republic of) Mr. Jeon MINSU

Phone +82 2 26 27 8312
 e-mail (main): minsuids@hanmail.net

Ministry of Oceans and Fisheries
 Mr. Youngjin KIM

Phone +82 44 200 5875
 Mobile phone: +82 10 6430 9396
 e-mail (main): ds3kgu@korea.kr
 e-mail (alternative): ds3kgu@naver.com

Latvia Maritime Administration of Latvia, Hydrographic Service
Mr Aigars GAILIS

Phone +371 67 06 21 45
Mobile phone: +371 264 499 24
e-mail (main): aigars.gailis@lhd.lv
e-mail (alternative): aigars111@gmail.com

Malaysia Malaysia Marine Department
Mr Hairizam ALBUKHARI

Mobile phone: +6 019 95 15 115
e-mail (main): hairizam@marine.gov.my
e-mail (alternative): hairizam@yahoo.com

Nautical Institute Nautical Institute
Mr David PATRAIKO

Phone +44 207 928 1351
Mobile phone: +44 7980 984 038
e-mail (main): djp@nautinst.org

Netherlands Ministry of Infrastructure and the Environment
Mr Ernst BOLT

Phone +31 88 7982 508
Mobile phone: +31 6 513 312 06
e-mail (main): ernst.bolt@rws.nl
e-mail (alternative): ebolt@gmx.net

Norway Norwegian Coastal Administration
Mr Guttorm TOMREN

Phone +47 7023 1150
Mobile phone: +47 907 92 874
e-mail (main): guttorm.tomren@kystverket.no

Panama Panama Maritime Authority
Mr Abdel DIAZ

Phone +507 501 5143
Mobile phone: +507 6225 9983
e-mail (main): adiaz@amp.gob.pa
e-mail (alternative): abdeldiaz17@hotmail.com

Portugal**Direcção de Faroís**

Mr Arlindo SANTOS

Phone +351 21 44 61 660
 e-mail (main): arlindo.ferreira.santos@marinha.pt
 e-mail (alternative): dirfarois@sapo.pt

Direcção de Faroís

Cdr Jorge TELES

Phone +351 21 446 1666
 Mobile phone: +351 9166 30653
 e-mail (main): santos.teles@marinha.pt

Instituto Hidrografico

LtCdr José Eduardo SOUSA LUIS

Phone +351 210 943 000
 Mobile phone: +351 210 943 081
 e-mail (main): sousa.lui_s@hidrografico.pt

Russia**Dept of Navigation & Oceanography**

Capt Andrey OLEJNIKOV

Dept of Navigation & Oceanography

Ms Elena PISKUNOVA

Scotland**Northern Lighthouse Board**

Captain Phil DAY

Phone +44 131 473 3190
 Mobile phone: +44 7785 300 366
 e-mail (main): phild@nlb.org.uk

**South
Africa****South African Maritime Safety Authority**

Mr. James COLLOCOTT

Phone + 27 21 938 3310
 Mobile phone: +27 82 45 84 890
 e-mail (main): jcollocott@samsa.org.za
 e-mail (alternative): james.collocott@gmail.com

Sweden**Swedish Maritime Administration**

Mr Johan WESTERLUND

Phone +46 10 478 48 30
 Mobile phone: +46 708 19 14 44
 e-mail (main): johan.westerlund@sjofartsverket.se
 e-mail (alternative): waez@hotmail.com

Swedish Transport Agency

LtCdr Mats HÖRSTRÖM

Phone +46 10 495 33 29
 Mobile phone: +46 76 721 10 43
 e-mail (main): mats.horstrom@transportstyrelsen.se
 e-mail (alternative): sjofart@transportstyrelsen.se

UK**General Lighthouse Authorities of UK & Ireland**

Mr Martin BRANSBY

Phone +44 (0)1255 245 042
 Mobile phone: +44 (0)7770 265 652
 e-mail (main): martin.bransby@gla-rnav.org

The Babcock International

Mr. Dave KELLEHER

Phone +44 7970132400
 Mobile phone: +44 7970132400
 e-mail (main): david.kelleher@babcockinternational.com
 e-mail (alternative): dave.kelleher4@icloud.com

Trinity House

Mr. David HAYES

Phone +44 1255 245 042
 e-mail (main): david.hayes@thls.org
 e-mail (alternative): davidalexhayes@gmail.com

Trinity House Lighthouse Service

Capt Roger BARKER

Phone +44 207 481 6917
 Mobile phone: +44 7785 111 519
 e-mail (main): roger.barker@thls.org

USA**Tideland Signal Corporation**

Mr Alfredo DOMINGUEZ

Phone +1 713 681 6101
 Mobile phone: +832 640 3399
 e-mail (main): Alfredod@tidelandsignal.com

US Coast Guard

Mr George DETWEILER

Phone +1 202 372 1566
 e-mail (main): george.h.detweiler@uscg.mil
 e-mail (alternative): ghdetweiler@comcast.net

US Coast Guard

Mr John STONE

Mobile phone: +1 703 939 4076
 e-mail (main): John.m.stone@uscg.mil

Apologies were received from the following.

Name	Organisation	Country
Festarini John	Canadian Coast Guard	Canada
Marek Ledóchowski	Urząd Morski w Gdynia	Poland
Raul Escalante	Hidrovia	Argentina
Goodbye		
Roger Njord Svinø	NCA	Norway

New Members

Name	Organisation	Country
Abdel DIAZ	Panama Maritime Authority	Panama
Deidre LANE	CIL	Ireland
Scott WINDOVER	CCG	Canada
John STONE	USCG	USA

ANNEX C WORKING GROUP PARTICIPANTS**Working Group 1 Navigational Requirements**

	Name	Organisation / Country
1	Roger Barker (Chairman)	THLS / England & Wales
2	Jorge Teles (Vice Chairman)	Direcção de Faróis / Portugal
3	Hairizam Albukhari	Malaysia Marine Department / Malaysia
4	Mamadou Balde	Ministère des Transports / Guinea
5	Jakob Bang	DMA / Denmark
6	Ernst Bolt	Ministry of Infrastructure and the Environment / The Netherlands
7	Vinent Bruger	DAM-DGITM-MEED / France
8	James Collocott	South African Maritime Safety Agency / South Africa
9	George Detweiler	US Coast Guard / USA
10	Abdel Diaz	Panama Maritime Authority / Panama
11	Alfredo Dominguez	Tideland Signal Corporation / USA
12	Nadine Epara	Autorité Portuaire Nationale / Cameroon
13	Jean Luc Fontan	Direction des Affaires Maritimes / France
14	Aigars Gailis	Latvian Maritime Administration / Latvia
15	Mats Hörström	Swedish Transport Agency / Sweden
16	Youngjin Kim	Ministry of Oceans and Fisheries / Republic of Korea
17	Risto Lang	Finnish Transport Agency / Finland
18	Rongwei Lang	China MSA / People's Republic of China
19	Harold McClenahan	CIL / Ireland
20	Gerhard Mueller-Hagen	Federal Waterways & Shipping Administration / Germany
21	David Patraiko	Nautical Institute / UK
22	Jean-Charles Cornillou	CEREMA / France

Working Group 2 Continuous Improvement

	Name	Organisation / Country
1	Gerry Brine (Chairman)	AMSA / Australia
2	Guttorm Tomren (Vice Chairman)	NCA / Norway
3	John Stone	US Coast Guard / USA
4	Jeon Minsu	Korea Association of AtoN / Republic of Korea
5	Martin Bransby	General Lighthouse Authorities of UK and Ireland
6	Luo Donggen	China MSA / People's Republic of China
7	Scott Windover	Canadian Coast Guard / Canada
8	Christian Herrlich	Federal Waterways & Shipping Administration / Germany
9	Cathrine Steenberg	Force Technology / Denmark
10	Dave Kelleher	Babcock International Group / UK
11	Gaëlle Nassif	CEREMA / France
12	José Luís	Instituto Hidrografico / Portugal
13	Andrew Oleynikov	Department of Navigation and Oceanography / Russia
14	Arlindo Santos	Direcção de Faróis / Portugal
15	Johan Westerlund	SMA / Sweden
16	Deirdre Lane	Commissioners of Irish Lights / Ireland

ANNEX D LIST OF INPUT PAPERS

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

Document number	Agenda Item	Title	Date latest issue
ARM2-1.2	1.2	Agenda	02-04
ARM2-1.4	1.4	Programme for the week	02-04
ARM2-2.1	2.1	Actions from ARM1	02-04
ARM2-2.2	2.2	Report of ARM1	02-04
ARM2-3.1.1	3.1	Comparison Risk Management Tools	02-04
ARM2-3.1.2	3.1	(C59-8.1.3) revision 1 proposed new document scheme	02-04
ARM2-3.1.3	3.1	(C59-8.1.4.2) revision 2 draft new committee policy and procedures	02-04
ARM2-4.1.1	4.1	C59 Report	02-04
ARM2-4.2.1	4.2	Report PAP ad-hoc meeting Rotterdam final	02-04
ARM2-4.3.1	4.3	IALA IMO MSC94 Report rev2nw	02-04
ARM2-8.2.1	8.2	(ARM1-11.2.2) WG1-WP1 On The Plans For Disaster Recovery Rev 1	02-04
ARM2-8.3.1	8.3	(ARM1-11.2.3) WG1-WP2 draft guideline marine spatial planning edit	02-04
ARM2-8.3.2	8.3	(ARM1-11.2.4) WG1-WP3 shipping and msp printable final v1	02-04
ARM2-8.3.3	8.3	(ARM1-11.2.5) WG1-WP4 draft guideline marine spatial planning clean	02-04
ARM2-8.3.4	8.3	(ARM1-11.2.6) WG1-WP5 UNESCO MSP stepbystep	02-04
ARM2-9.2.1	9.2	input paper on task 2.5.1	19-05
ARM2-9.2.2	9.2	Environmental Consideration in Aids to Navigation Engineering 1036	19-05
ARM2-9.3.1	9.3	(ARM1-11.1.10) External Document Control Sheet	02-04
ARM2-9.4.1	9.4	(ARM1-11.1.8) Liaison note to all committees on ways of working for the NAVGUIDE update	02-04
ARM2-9.4.2	9.4	(ARM1-11.2.1) NAVGUIDE 2015 tracking table	02-04
ARM2-9.4.3	9.4	(VTS39-12.1.7) Liaison note in response to ARM - NAVGUIDE contact	20-04
ARM2-9.4.4	9.4	(ENG2-10.14) ARM1-11.1.7 liaison note to ENG re navguide audible signals	21-05
ARM2-9.4.5	9.4	1090 Ed1 Audible Signals_ENG2 updated by Frank	21-05
ARM2-9.4.6	9.4	Information from ENG2 on update NAVGUIDE Audible Signals	21-05
ARM2-9.4.7	9.4	(ENG2-11.1.8) Liaison Note to ARM on navguide update	22-05
ARM2-9.4.8	9.4	(ENG2-11.1.9) Navguide update plan 20150521	22-05
ARM2-9.8.1	9.8	(ENAV16-14.1.15) Liaison note from eNAV to ARM	04-05
ARM2-10.1	10	(ARM1-10.1) ARM committee workplan 2014-18 arm1 v1.0	02-04

Presentations given by rapporteurs and presenters

All presentations are posted on the Committee section of the IALA website

Document number	Agenda Item	Title
ARM2-5.1	5	Marine Planning Presentation 25 May 2015
ARM2-5.2	5	Rapporteur Presentation M4-Gerry Brine
ARM2-5.3	5	E-Navigation on Board
ARM2-6.1	6	IALA WWA brief Rev 25 May
ARM2-6.2	6	NRIM Intro
ARM2-6.3	6	DBDD TAC update feb 2015 rev
ARM2-6.4	6	Development of the Lighthouse authorities of the Russian Federation

ANNEX E LIST OF OUTPUT AND WORKING PAPERS

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

Number	Title	Status
ARM2-13	Report ARM2	To Council to note
ARM2-10.2	Work Programme 2014-2018 update ARM2	To Council to approve
ARM2-11.1.1	Liaison Note to Council on meeting away from HQ	To Council to approve
ARM2-11.1.2	Liaison Note to Council on Workshop AIS developments and their uses	To Council to approve
ARM2-11.1.3	Liaison Note to ENG on audible signal information in the NAVGUIDE	To ENG to action
ARM2-11.1.4	Liaison Note to ENAV on e-Navigation developments	To ENAV to consider, ENG and VTS to note
ARM2-11.1.5	Liaison Note to IALA members on Disaster Recovery Planning Rev 1	To all Committees to action
ARM2-11.1.6	Liaison Note to Council on updates of ARM Work Programme (2014-2018)	To Council to note
ARM2-11.1.7	Liaison Note to all committees on NAVGUIDE update	To all Committees to action
ARM2-11.1.8	Liaison Note to PAP on new IALA documentation structure	To PAP to action
ARM2-11.1.9	Liaison to PAP on Control sheet on committee external liaison	To PAP to note

Working documents will remain within the Committee for further review and will be input for ARM3.

Number	Title
ARM2-11.2.1	WG1_WP1_On_The_Plans_For_Disaster_Recovery_Rev_1
ARM2-11.2.2	WG1_WP 2_draft_guideline_marine_spatial_planning_edit
ARM2-11.2.3	WG1_WP3_draft recommendation on the marking of wrecks
ARM2-11.2.4	NAVGUIDE 2015 tracking table
ARM2-11.2.5	ARM2-11.2.5 Management of AtoN in Env Prot Areas 20150528 Final for Report

ANNEX F ACTION ITEMS

Action Items for Secretariat

1. The **Secretariat** is requested to invite National Members for the submission of photographs for the next edition of the NAVGUIDE. 5
2. The **Secretariat** is requested to forward working paper ARM2-11.2.1 to ARM3. 9
3. The **Secretariat** is requested to forward working paper ARM2-11.2.2 to ARM3. 9
4. The **Secretariat** is requested to forward the Liaison Note on the ARM input to the e-Navigation Committee (ARM2-11.1.4) to the ENAV Committee to consider and to the ENG and VTS Committees to note. 9
5. The **Secretariat** is requested to forward the Liaison Note on audible signal information on the NAVGUIDE (ARM2-11.1.3) to the ENG Committee. 9
6. The **Secretariat** is requested to forward the Liaison Note on Disaster Recovery (ARM2-11.1.5) to the ENG, ENAV and VTS Committees. 9
7. The **Secretariat** is requested to forward working paper ARM2-11.2.3 to ARM3. 9
8. The **Secretariat** is requested to forward working paper ARM2-11.2.5 to ARM3. 11
9. The **Secretariat** is requested to forward Output Paper ARM 2-11.1.9 Control sheet on committee external liaison to PAP. 11
10. The **Secretariat** is requested to forward the Liaison Note on New IALA Documentation Model (ARM2-11.1.8) to the PAP. 11
11. The **Secretariat** is requested to forward the Liaison Note on the NAVGUIDE ARM2-11.1.7 to PAP and if approved, circulate to all committees prior to the October / November 2015 round of meetings. 12
12. The **Secretariat** is requested to forward the working paper ARM2-11.2.6 to ARM 3. 12
13. The **Secretariat** is requested to forward the updated version of ARM2-10.2 to Council and make it input for ARM3. 13
14. The **Secretariat** is requested to forward the Liaison note (ARM2-11.1.6) on the update of the current Work Programme to Council to approve ARM2-10.2. 13
15. The **Secretariat** is requested to forward the report of ARM2 (ARM2-13) after completion (deadline 15 June 2015) to the IALA Council, to note. 13

Action Items for Members

16. **ARM members** are requested for the submission of photographs for the next edition of the NAVGUIDE. 5
17. **ARM members** are requested to provide changes to the IALA Dictionary to the task leader prior to ARM3. 12