**ARM Committee Task Plan 2023 – 2027**

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| **Standard** | **Scope** | **No.** | **Task** | **Comment** | **17** | **18** | **19** | **20** | **21** | **22** | **23** | **Coop. entity** |
| **WG#1 – Navigational Requirements** | | | | | 2023 | 2024 | 2024 | 2025 | 2025 | 2026 | 2026 |  |
| S1010  Marine AtoN | Marine AtoN planning | 1.2.1 | Compile new Guideline on AtoN Buoy Tender requirements and specification | New Guideline on Tender requirements. |  |  |  |  |  |  |  | ARM lead, ENG |
| Marine AtoN planning | 1.2.2 | Compile guidance for buoy tender activities |  |  |  |  |  |  |  |  | WWA |
| Marine AtoN planning | 1.2.3 | Full review of Guideline G1078 The Use of AtoN in the Design of Fairways | Revise Guideline G1078. |  |  |  |  |  |  |  |  |
| Marine AtoN planning | 1.2.4 | Development of aspects of digital communications, including promoting broadband connectivity for operational technology. | Based on IHO/IALA portrayal and IALA comms workshop output. |  |  |  |  |  |  |  | ARM lead, DTEC |
| Marine AtoN planning | 1.2.5 | Guidance on the use of simple IOT sensors on physical aids | Establish requirement for IOT sensors. |  |  |  |  |  |  |  |  |
| Marine AtoN planning | 1.2.6 | Develop further guidance for navigators on the use of AtoN | Develop a guideline and make relevant training material available to enhance mariners’ understanding of marine aids to navigation (AtoN) and to facilitate the effective use thereof. |  |  |  |  |  |  |  |  |
| Marine AtoN planning | 1.2.7 | Prepare an appropriate submission to IMO advising of the publication of the updated MBS highlighting MATON and MASS content. | Proposal for IMO Circular |  |  |  |  |  |  |  |  |
| Marine AtoN planning | 1.2.8 | Develop guidance on the provision of AtoN and risk management for autonomous vehicle/vessel operations (Maritime Autonomous Surface Ship, MASS) |  |  |  |  |  |  |  |  |  |
| Marine AtoN planning | 1.2.9 | Review relevant sections of NAVGUIDE in cooperation with the Secretariat | Revised NAVGUIDE |  |  |  |  |  |  |  | ARM, ENG, VTS, DTEC |
| Obligations and regulatory compliance | 1.1.1 | Monitor IMO work on STCW and develop IMO submissions and supporting advice on amendments to STCW in respect of IALAs inclusion within the Convention to cover AtoN training for navigators. | Develop a training course and make relevant training material available to enhance mariners’ understanding of marine aids to navigation (AtoN) and to facilitate the effective use thereof. IALA Model Course and IMO submission and IALA Secretariat representation at IMO HTW sub-committee session 10 onwards. |  |  |  |  |  |  |  |  |
| Risk management | 1.4.1 | Enhancing the safety and efficiency of navigation around offshore installations | To develop comprehensive guidance that will assist members enhance the safety of navigation and environmental protection in / around offshore renewable energy installations (OREI). |  |  |  |  |  |  |  | ARM lead,VTS |
| Quality management | 1.5.1 | Develop a recommendation and guideline consolidating content from G1030, G1035 and G1004. | Compile a recommendation and guideline to incorporate all references relating to the Categorization, Availability Objectives (G1030), Availability and Reliability for Short Range Aids to Navigation (G1035), Calculation of Availability (G1004) and relevant text appearing in the 2018 & draft 2023 NAVGUIDE that are not cross-referenced in the aforementioned Guidelines. |  |  |  |  |  |  |  |  |
| Quality management | 1.5.2 | Revision of Guideline 1052 on Quality Management in Marine Aids to Navigation Service Delivery | Revised Guideline G1052 |  |  |  |  |  |  |  |  |
| Quality management | 1.5.3 | Revise Recommendation R0132 Quality management for AtoN authorities. | New edition of R0132, as proposed by China MSA in ARM 15-7.2.2 |  |  |  |  |  |  |  |  |
| S1020  AtoN design and delivery | Visual signalling | 2.1.1 | Consider developing guidance on the marking of test areas for autonomous vessels and vehicles, ice roads and competition and event areas etc | Marking of test area for autonomous and unmanned/remote controlled ships and vehicles, due to the fact that i.e. industry and scientific institutes in Sweden have made inquiries to the STA regarding such marking. Marking of ice roads for vehicle traffic on lakes and archipelagos in the vicinity of fairways to prevent ice breaking of established ice roads. Marking of competition and event areas for activities such as swim runs, kayaking, rowing, sailing, racing boats, hovercraft, and boat exhibition etc. |  |  |  |  |  |  |  |  |
| Design, Implementation & Maintenance | 2.2.1 | Develop Recommendation and Guideline on the use of Drones for AtoN inspection and maintenance |  |  |  |  |  |  |  |  |  |
| S1050 Training and certification | Training and assessment | 5.1.1 | Model course on incident response and crisis coordination | Develop a model course on training on incident response and for crisis coordinators within AtoN and VTS system operating organisations. |  |  |  |  |  |  |  | ARM lead, VTS |
| S1060 Digital communication technologies | Harmonized maritime connectivity | 6.3.1 | Review und update G1062 Establishment of AIS as a [Marine] Aid to Navigation | Update to the latest development of AIS; This revision must be reflected in G1022, i.e MAtoN |  |  |  |  |  |  |  |  |
| Wide and medium bandwidth systems | 6.1.1 | Review G1050 Management and Monitoring of AIS Information | Coordinate with ARM WG3 (IALANET, etc.). |  |  |  |  |  |  |  |  |
| S1010  Marine AtoN | Marine AtoN planning | 1.2.11 | Develop guidance on the provision of Marine AtoN for autonomous vehicle/vessel operations (Maritime Autonomous Surface Ship, MASS). | Awaiting DTEC |  |  |  |  |  |  |  | DTEC Lead, ENG, ARM, VTS |
| Obligations and regulatory compliance | 1.1.2 | Consider developing guidance on the certification of technical equipment, information systems and technical infrastructure related to MASS in the domain of IALA | Develop a guideline on the certification of technical MASS equipment, information systems, and technical infrastructure within the domain of IALA. |  |  |  |  |  |  |  | DTEC Lead, ENG, ARM, VTS |
| S1020  AtoN design and delivery | Floating Aids to Navigation | 2.3.1 | Update G1066 Design of floating AtoN moorings | Update G1066 Design of floating AtoN moorings 1.1 General consideration on mooring materials, and comparison of mooring loads and design. |  |  |  |  |  |  |  | ENG lead, ARM |
| S1040 VTS | VTS implementation | 4.1.1 | Develop guidance on delineating the VTS area | Develop guidance on delineating the VTS area. considering risk assessment and MRN |  |  |  |  |  |  |  | VTS lead, ARM |
| S1060 Digital communication technologies | Harmonized maritime connectivity | 6.3.2 | Recommendation for the AIS Service | Develop Recommendation for the AIS Service  Planned in draft Standard S1060 (supersedes A-124). Move recommendation A-124 content to Recommendation R0123 or remainder to Guideline(s) |  |  |  |  |  |  |  | DTEC lead, ARM |
| Harmonized maritime connectivity | 6.3.3 | Review of the contents of A-124 series recommendations | A-124 APPENDIX 0 to APPENDIX 19 become Guidelines for Recommendation R1008: Move recommendation A-124 content to Recommendation R0123 remainder to Guideline(s) |  |  |  |  |  |  |  | DTEC lead, ARM |
| **WG#2 – Information Services and Portrayal** | | | | | 2023 | 2024 | 2024 | 2025 | 2025 | 2026 | 2026 |  |
| S1010  Marine AtoN | Risk management | 1.4.2 | Consider the development of IALA as a facilitator for an ISAC (Information Sharing and Analysis Centre) in relation to cyber security. | Reference the result of the IALA Cyber Security workshop. |  |  |  |  |  |  |  |  |
| Risk management | 1.4.3 | Develop guidance on cyber security for Marine AtoN |  |  |  |  |  |  |  |  | ARM lead, VTS, ENG, DTEC |
| S1050 Training and certification | Accreditation, competency, certification and revalidation | 5.2.1 | Develop a model course on AtoN Cyber Security arrangements |  |  |  |  |  |  |  |  |  |
| S1020  AtoN design and delivery | Design, Implementation & Maintenance | 2.2.1 | Full review of A-126, G1084 and other AIS associated documentation |  |  |  |  |  |  |  |  | ARM lead, ENG, VTS, DTEC  WG2 lead with WG1 |
| Design, Implementation & Maintenance | 2.2.2 | Develop an IALA guideline on the Maritime Architecture Framework |  |  |  |  |  |  |  |  |  |
| Design, Implementation & Maintenance | 2.2.3 | Develop an IALA recommendation and guideline on developing Harmonized Waterway Concept | Develop recommendation & guideline (with possible repository of waterways hosted by IALA) |  |  |  |  |  |  |  |  |
| S1050 Training and certification | Accreditation, competency, certification and revalidation | 5.2.2 | Create S-100 model course | How to make use of S-100 product specifications |  |  |  |  |  |  |  |  |
| S1060 Digital communication technologies | Harmonized maritime connectivity | 6.3.4 | Define user requirements for Maritime Connectivity, Maritime Internet of Things (IoT), and MRN addressing (may be three subtasks) | Revised Guideline G1143 to include aspects relevant to MRN |  |  |  |  |  |  |  |  |
| S1070 Information services | Data models and data encoding (IVEF, S-100, S-200, ASM) | 7.1.1 | Digital Fairway | Develop a guideline on the developments and implementation of the digital fairway. |  |  |  |  |  |  |  | DTEC lead, ARM |
| Data models and data encoding (IVEF, S-100, S-200, ASM) | 7.1.2 | Contribute to the standardization efforts with respect of the requirements of the S-100 domain experts | Support and contribute to international standardization efforts (IMO, IHO, WMO, etc.) |  |  |  |  |  |  |  | ARM\*,DTEC |
| Data models and data encoding (IVEF, S-100, S-200, ASM) | 7.1.3 | New Guideline on Operational considerations for S-200 (S-201 AtoN information and S-230 Application Specific Messages) | Guideline on Operational considerations for S-200 |  |  |  |  |  |  |  |  |
| Data models and data encoding (IVEF, S-100, S-200, ASM) | 7.1.4 | Continue to Develop Product Specification S-201. Continue development on S-201, specifically on Maintenance, data validation, and harmonization with S-125, S-124, and S-101 | Review and revise S-201 as needed, publishing edition 2.0 and continuing development throughout the work plan |  |  |  |  |  |  |  |  |
| Data models and data encoding (IVEF, S-100, S-200, ASM) | 7.1.5 | Coordinate with IHO on implementation of IALA PS into S-98 | Ref. IALA/IHO Workshop  Support IHO’s S-100 Implementation documents with consideration of IALA’s remit within S-100. |  |  |  |  |  |  |  |  |
| Data models and data encoding (IVEF, S-100, S-200, ASM) | 7.1.6 | Continue development on S-125 in coordination with IHO NIPWG | Draft Product Specification for S-125 to be delivered to IHO, (Ref workshop - develop S-125 as a suitable replacement for the List of Lights and Fog Signals. S-125 should be tested at the earliest opportunity utilizing the services of the IHO Singapore lab that have been offered for this purpose. Review and revise S-125 as needed, publishing edition 1.0 and continuing development throughout the work plan |  |  |  |  |  |  |  |  |
| Data models and data encoding (IVEF, S-100, S-200, ASM) | 7.1.7 | Continue development on MRN documentation, considering inputs from IALA Secretariat, other committees, or others as needed | Review and revise MRN Guidelines and Recommendation as needed, publishing edition 2.0 and continuing development throughout the work plan |  |  |  |  |  |  |  |  |
| Data models and data encoding (IVEF, S-100, S-200, ASM) | 7.1.8 | Review Guideline G1106 on producing an IALA S-200 series Product Specification | Ref. First IALA/IHO Workshop. To update the existing guideline G1106 |  |  |  |  |  |  |  |  |
| Data models and data encoding (IVEF, S-100, S-200, ASM) | 7.1.9 | Coordinate Committee support and submissions for IALA representation at IHO working groups in cooperation with Secretariat (HSSC, S-100WG, NIPWG) | IHO coordination including IALA submission to HSSC on the requirement to amend S-101 AtoN portrayal. |  |  |  |  |  |  |  | ARM lead, DTEC |
| Data models and data encoding (IVEF, S-100, S-200, ASM) | 7.1.10 | Monitor the development of S-201 Testbed | Update reports on S-201 testbed |  |  |  |  |  |  |  |  |
| Data models and data encoding (IVEF, S-100, S-200, ASM) | 7.1.11 | Develop, implement and execute procedures for IALA to add, maintain and harmonize items to the IHO S-100 Feature Concept Dictionary(FCD) | Guidance on the procedures to add definitions to the FCD. Coordination of harmonization of IALA definitions. Guidance and templates for add features and definition to the FCD.  Update the existing guideline G1087 |  |  |  |  |  |  |  |  |
| Data models and data encoding (IVEF, S-100, S-200, ASM) | 7.1.12 | Create S-200 Implementation Plan, following similar S-100 Implementation Strategy and/or Roadmap | Develop a transition plan aiming to the creation adoption and delivery of S-200 products and services |  |  |  |  |  |  |  |  |
| Data models and data encoding (IVEF, S-100, S-200, ASM) | 7.1.13 | Develop guidance on the symbology and portrayal of AtoN for charting |  |  |  |  |  |  |  |  |  |
| Data models and data encoding (IVEF, S-100, S-200, ASM) | 7.1.14 | Development of technical service specifications for the provision of AtoN information | To develop technical service specifications for the provision of AtoN information using the G1128 guideline ‘Specification of e-navigation technical services’. |  |  |  |  |  |  |  |  |
| Data models and data encoding (IVEF, S-100, S-200, ASM) | 7.1.15 | Review Guideline G1159 on ship reporting from the shore‐side perspective | Guideline for Coastal States on implementation of MSW |  |  |  |  |  |  |  |  |
| S1050 Training and certification | Training and assessment | 5.1.2 | Training in implementation of digital solutions (data analytics & maritime informatics) | Develop a guideline on skills related to the digital environment, such as data analytics and maritime informatics and associated training programs with WWA. |  |  |  |  |  |  |  | DTEC lead, ENG, ARM, VTS |
| **WG#3 – Risk management** | | | | | 2023 | 2024 | 2024 | 2025 | 2025 | 2026 | 2026 |  |
| S1010  Marine AtoN | Risk management | 1.4.4 | Review Risk Management related documentation. Update as per ongoing risk toolbox developments. |  |  |  |  |  |  |  |  |  |
| Risk management | 1.4.5 | Develop a method to quantify and evaluate various risk mitigation options |  |  |  |  |  |  |  |  |  |
| Risk management | 1.4.6 | Encourage IALA members and other organisations to share historic AIS and other vessel tracking data with IALA. IALA aims to use such data for risk assessment, research and training purposes. | Review existing guidance (including G1086) and develop new guidance to assist IALA in its aim to gather historic AIS and other vessel tracking data. |  |  |  |  |  |  |  |  |
| Risk management | 1.4.7 | Conduct a global scan of current risk analysis tools and identify potential candidates for inclusion within the IALA Risk Management Toolbox. |  |  |  |  |  |  |  |  |  |
| Risk management | 1.4.8 | Monitor the IRMAS reporting tool, ensuring it meets the requirements for future records of risk management. Ensure the form is modified as required. |  |  |  |  |  |  |  |  |  |
| Risk management | 1.4.9 | Ensure long term sustainable supportability for IWRAP Software. |  |  |  |  |  |  |  |  |  |
| Risk management | 1.4.10 | Guideline for Risk Assessment of Cyber Security threats | Guideline for Risk Assessment and Cyber Security including Risk assessment methods Identification of risks, Identification of counter measures, Identification of core elements to ensure cyber security |  |  |  |  |  |  |  |  |
| S1050 Training and certification | Training and assessment | 5.1.3 | WWA lesson plans to review | Review and updating of the WWA Lesson plans as requested by the Academy |  |  |  |  |  |  |  | ENG lead, ARM, DTEC, VTS |

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| **Symposia, Workshops & Seminars for 2023-2027 work period** | **Date** | **Place** | **Lead / Target Group** |
| Joint workshop between ARM and VTS Committee on MSs and/or digital services | TBD | TBD | ARM lead / VTS, DTEC |
| Joint workshop on sustainability in Marine AtoN provision | November 2025 | IALA HQ, France | ENG lead / All |
| Joint IALA/IHO Workshop on S-100/S-200 | September 2024 | Annapolis, US | ARM |
| IALA Symposium | 2025 | Singapore | VTS lead / All |

**Legend: Legend for task numbering:**

Blank: Ongoing task Digit 1: WG 1, 2 or 3

Light orange: To Council to note or approve Digit 2: Standard, Scope No.; Other committees leading = 8; No Standard = 9

Light grey: Task completed or deleted Digit 3: In sequence (1, 2, 3 etc.)

Digit 4: Sub task a, b, c…(if needed)