**ARM WG1 TG 1.5.4: Develop guidance for navigators on the use of AtoN**

It is recommended that “navigators” be changed to “mariners” to make it more encompassing.

**Note**: R1021 Marine Aids to Navigation Awareness for Mariners, point 4(a) indicate:

“*That the 2010 Manila amendments to the annex to the International Convention on Standards for Training, Certification and Watchkeeping for Seafarers, 1978 (STCW) states, inter-alia, that:*

*a deck officers should have the ability to determine the ship’s position by use of aids to navigation, including lighthouses, beacons, and buoys*.”

Task 1.5.4: *Develop a Guideline on AtoN Awareness for mariners suitable for use by a range of bodies, including National Competent Authorities, STCW Training Organisations and shipping owners/organisations.*

*The Guideline should be prepared with a view to influencing further revisions of the STCW Code.*

*This gap analysis is approached from the view of the career path of a mariner, and his/her interaction with AtoN, as well as new or ‘complex’ AtoN at the various stages of their career.*

1. **Gap Analysis**

| **Brainstorming - what should be taken into account in developing new Guideline?** | **Comments** |
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| 1. **Attendance at nautical/naval tertiary institution (Theoretical)** | |
| 1. Which STCW module(s) for Officer of the Watch (OOW) training currently include any AtoN information? What is the quality and extent of the information required? 2. How could this be amended or improved in future? 3. How do you ensure quality of AtoN training material and continued relevance of this training material? | 1. Chartwork. AtoN info is not considered or specified in the STCW model course. 2. IALA (WWA) to produce content, as a start for National Competent Authorities, STCW Training Organisations and shipping owners/organisation*s* to ensure global uniformity and dissemination of information. 3. Consider roadmap (phased-in approach) to ensure AtoN guidance and training become part of the STCW model course content (long term goal), alternatively for the Navigation module.   Once this materialise, then the material is to be used for IMO STCW training.   1. Include small vessel skipper training 2. Refer to training on local inland waterway markings |
| 1. **On board / In-service training – Cadet / Apprentice (Practical)** | |
| 1. How is a cadet/apprentice exposed to AtoN information / training on board a ship? 2. Training Record Book (TRB) 3. Guidance and training from OOW and performing watchkeeping duties. 4. Publications carried on-board 5. Information contained on charts (paper and ENC). 6. How to inform mariners of non-SOLAS vessels about new AtoN (e.g. MAtoN)? | 1. Expose cadet/apprentice to AtoN on board a ship 2. Requirement for all cadets to complete Training Record Book (TRB). Currently there is no section, or requirement for AtoN in the TRB. How could AtoN be included in the TRB?   Consider/determine who is responsible (mandate) for the content of the TRB? STCW requirement? WWA to engage relevant authorities and produce required section on AtoN for TRB’s.  Could the WWA produce explanatory video additional to the TRB as teaching aid?  *The TRB is the only tool to standardise cadet / apprentice knowledge and ensure global on-board AtoN training standards.*   1. Reliant on OOW experience and understanding of AtoN. Not a variant IALA can address.   Depending on geographical area (Africa vs Northern Europe) of practical experience gained, limited or no exposure will be gained in many AtoN variants (virtual AtoN, complex Sector lights etc.)   1. Which compulsory publications contain AtoN information currently? Chart symbols and abbreviations? *NP735 IALA Maritime Buoyage System (***Note**: It should be the latest actual IALA MBS document that should be the carriage requirement). What else?   Should IALA, or does IALA formulate content, for these publications, or is the mandate for this with IMO only?   1. Could new or complex AtoN be included in paper charts’ notes?   Similarly for ENC charts when icon on ECDIS is interrogated, to include more information for the mariner. Who would be responsible or make this possible, considering S100 standard? IHO & IALA?  If AtoN publication is carried, possibly only include reference(s) to publication, to ensure mariners optimise the utilisation of the AtoN publication.   1. How to inform mariners of non-SOLAS vessels about new AtoN (e.g. MAtoN)? Via Competent Authorities, Boating Clubs, professional bodies/associations/societies, publications, etc. |
| 1. **On-board / In-service training – OOW (Practical)** | |
| 1. How is OOW exposed to AtoN information / training on board a ship? 2. Publications (See point 2.(a)(iii))&(iv) above) 3. When conducting physical passage planning including paper and ENC charts use 4. Setting exams | 1. See point 2.(a)(iii) above 2. See point 2.(a)(iv) above   Passage planning include mentioning of significant AtoN along planned tracks, but should this be stipulated in company sms (under International Safety Management (ISM)) to ensure OOW pay specific attention to AtoN? |
| 1. **To what degree, through which platforms and by which authorities, is AtoN information disseminated globally to the mariner? How can the delivery be improved?** | |
| 1. IHO   See 2.(a)(iv) above   1. IALA   Recommendations & Guidelines  See 1.(c), 2.(a)(i)&(iii) above   1. Publications/Online   (See point 2.(a)(iii))&(iv) above)   1. Industrial partner websites and marketing information 2. Tertiary training material   See 1 (a), (b) and (c) above | 1. See 2.(a)(iv) above 2. Producing study material as noted in 1.(c), 2.(a)(i)&(iii) to ensure global standard   Publishing arrangements with partner entities (IMO, IHO, Nautical Institute, industrial partner publications, etc.) if not in place.  Social media sharing and onward sharing by all members. Could include short educational clips (30sec – 1min) that provide practical caution/advisory notes to the navigator (requires continues updating). Could IALA produce this?  How does recommendations and guidelines reach the navigator if not via online portal?   1. See 2.(a)(iii) above. Includes all forms of print. What should be the focus of information distributed? Should all IALA Industrial Members print (distribution methods of publications, and other printed information) also be on IALA website?   See 4(b) above wrt online distribution.   1. Could include ‘educational’ pages that provide practical caution notes for the mariner wrt AtoN, provided by IALA for distribution. 2. Only way to standardize global standard. |
| 1. **What information should be included in training material for mariners?** | |
| 1. MBS 2. Navguide 3. Specific AtoN related training 4. Other | 1. All included at tertiary level. Will only new or ‘complex’ AtoN be share via other platforms? 2. See (a) above. Be mindful of duplication between MBS & Navguide. 3. ?? |
| 1. **Possible stumbling blocks and considerations** | |
| 1. Ability to affect change wrt to documentation and legislation ie. STCW, TRB, Compulsory Publication list content 2. Overstepping boundaries wrt to point 6(a) 3. Possible cost involved 4. Quality of information produced 5. Producing material that is too verbose or extensive to effectively educate navigators (they are simple folk ;-)) | 1. Determine starting point? Who to approach. 2. How to approach relevant organisations (IMO, IHO. etc.)? 3. To be determined or scoped 4. WWA to drive the project and ensure uniformity of training material on all platforms. 5. Concise and shortened ‘modules’ to be produced. ???? |
| 1. **What should be the focus of a Guideline on AtoN awareness for officers (based on G1149 on VTS Training for Deck Officers)?** | |
| 1. Introduction 2. Aims & Objective – Initial 3. Aims & Objective - Long-term 4. Training Activities    1. Maritime training institutions (Theoretical)    2. On board / In-service training – Cadet / Apprentice (Practical)? 5. Benefits of AtoN for the Bridge Team? 6. Where to find information on AtoN? 7. New AtoN and developments, including challenges. Disseminate amendments / new AtoN information globally to the mariner? 8. Challenges with AtoN for mariners today? What causes confusion? 9. Acronyms and Definitions 10. ? | 1. Guidance and information provided by WWA to be used by maritime training organisations in the development of training on AtoN as an integral part of the training of mariners. 2. Influence/set global policy on AtoN training at all levels. 3. List relevant information sources i.e. MBS, Navguide, etc. 4. Provide positional awareness   Supplement other systems GNSS of position fixing  ??   1. AIS, MAtoN, virtual AtoN, etc. 2. Should global survey be initiated to determine more exactly what are mariners’ challenges wrt AtoN? 3. ? |

**During discussion on 29/06/2021** (delete before distribution**)**

1. Guttorm:

* AIS AtoN – Canada did survey and display not standard world-wide
* Referred to virtual AIS and MAtoN

1. Trevor Harris: Aim guideline at training academies and competent authorities
2. Chang Peng: Contents to be at practical and tactical level
3. Oleg(??) (Russia): It should be practical. Should be for all mariners, not only for professional mariners
4. Guttorm: Confusion for mariners, e.g. background lighting, how to use sector- and range lights, when to use virtual, for positioning - used fixed AtoN
5. Trevor: Get information from training institutions as to the type of training material being used
6. Kevin to dig out information from Nautical Institute on an AtoN survey that they did some years back
7. Kevin re. WWA making videos available. Videos should be OK if they can support a guideline etc. With good quality content we could put something together, also with animations etc.