NAVGUIDE 2022 publication plan ARM 12 working doc

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* One sub-chapter should not exceed 5 pages.
* Definitions of defined terms should refer to the IALA dictionary.
* All references mentioned in the reference notes are cited in the text, and vice versa

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| --- | --- |
| Current | Revised version |
| 1. Introduction to IALA-AISM 2. Concepts and accuracy of navigation 3. Marine Aids to Navigation 4. e-Navigation 5. Vessel Traffic Services 6. Other services and facilities 7. Power supplies 8. Provision, design and management | 1. Introduction to IALA-AISM 2. Concepts and accuracy of navigation 3. AtoN planning and service requirements 4. AtoN design and delivery 5. Radionavigation services 6. Vessel Traffic Services 7. Training and certification 8. Digital communication technologies 9. Information services 10. Other services and facilities |

**Task for ARM 13:**

* Consider input paper from Republic of Korea
* Liaison note sent to all committees for input
* Ensure consistency in terms, update dictionary where necessary and ensure alignment
* Email with inventory of sections sent to all ARM WG’s for input by early January
* Draft revised version to be presented at ARM 13, March 2021

[Annex 1] the draft table of contents

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Chapter 1 – An introduction to IALA-AISM** | | Secretariat |  |  |  |  |  |  |
| **Chapter 2 - Concepts and Accuracy of Navigation** | |  |  |  |  | Comments |  |  |
| 2.1 | Navigational Methods | ARM | WG 1 | moderate |  | Verify IMO resolution  p. 12 RADIONAVIGATION suggest Electronic navigation  review the principal methods |  |  |
| 2.2 | Accuracy Standards for Navigation | ARM | WG 1 | minimal |  | Verify IMO resolution |  |  |
| 2.3 | Phases of Navigation | ARM | WG 1 | minimal |  | IHO verification – eec will be the same but states will be recognize to have 350 nm from the coast |  |  |
| 2.3.1 | Ocean Navigation | ARM | WG 1 | minimal |  |  |  |  |
| 2.3.2 | Coastal Navigation | ARM | WG 1 | minimal |  |  |  |  |
| 2.3.3 | Harbour Approach | ARM | WG 1 | moderate |  | Just say DGNSS instead of GPS & DGPS |  |  |
| 2.3.4 | Restricted Waters | ARM | WG 1 | minimal |  | Just say DGNSS instead of GPS & DGPS |  |  |
| 2.4 | Measurement Errors and Accuracy | ARM | WG 1 | minimal |  |  |  |  |
| 2.4.1 | Measurement Error | ARM | WG 1 | minimal |  |  |  |  |
| 2.4.2 | Accuracy | ARM | WG 1 | minimal |  |  |  |  |
| 2.5 | Hydrographic consideration | ARM | WG 1 | moderate |  |  |  |  |
| 2.5.1 | Charts | ARM | WG 1 | Moderate - significant |  | Many countries removing paper from carriage requirements when referring to charts |  |  |
| 2.5.2 | Datum | ARM | WG 1 | Moderate |  | Even though 84 is going, many countries will take a long time. Still many countries still have their own datum and many paper charts that may not be in proper datum  Replace GPS with GNSS |  |  |
| 2.5.3 | Accuracy of Charts | ARM | WG 1 | Moderate |  | In going to ENC some countries may go to fewer scales  Change Zones of confidence (ZOC) p20 |  |  |
| 2.5.4 | Charted Buoy Positions | ARM | WG 1 | Significant |  | Verify IMO Resolution  Earth without capitals (p. 21)  ZOC abbreviation seems to be an issue in multiple nationalities  Just explain that it is an accuracy rating guide for charts |  |  |
| **Chapter 3 – AtoN planning and service requirements**  **Marine Aids to Navigation**  **Change title to :**  **Visual and other physical Marine aids to navigation** | |  |  |  |  |  |  | Proper section in guide |
| 3.1 | Obligation and regulatory compliance  3.1 Operational requirements | ARM | WG 1 | Minimal |  | Change – chapter 4 of this naviguide instead of “the" |  |  |
| 8.1 | International Criteria | ARM | WG 1 | ? |  |  |  |  |
| 3.2 | AtoN planning  3.2 visual and audible marine aids to navigation design theory | ARM | WG 1 | significant |  | Replace conspicuous with distinctive p21  Remove traffic signals? Maybe p.24  Indicating information on tides to mariners  Stick to definition of using aids to verify position  Marking bridges?  Example of audible – fog horn p24 (visibility conditions)  \*Be conscious of words used in many IALA documents should be possible to translate in many languages?  When will we move to the six UN languages and what documents will be included?  \*verify IALA recommendations and guidelines? Are we only referring to normative?  \*consistency in the use of AtoN, sometimes marine aids to navigation, aids to navigation…  \*Clear how we use various words:  Marks –  Visual marks –  Aids to navigation –  Navigational aids -  In the beginning of the document  Properly  Start with dictionary |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 3.2.1 | Visual Perception | ENG & ARM WG 1 |  |  |  | Dr. Tansley??? Ask Jordan.  Verify \*recommendation R0201  \*verify International commission on illumination (CIE) standard S004/E 2001 |  |  |
| 3.2.1.2 | Meteorological visibility | ? |  |  |  | Why is this here? And who defines it?  Could it be titled just visibility? What other types of visibility?  \*pictures? Verify, confirm, new…  \*define international meterological authority?  \*visibility related to pollution? Smog? In Navguide, update guidelines and ask WG3 about including in risk analysis? |  |  |
| 3.2.1.6 | Use of binoculars |  |  |  |  | Could be renamed:  Visibility with binoculars  Include can also use binoculars at night (night vision goggles, NVG) |  |  |
| 3.2.1.7 | Geographical range |  |  |  |  |  |  |  |
| 3.2.2 | Daymarks | ENG |  |  |  | Day boards, day signals…  could be any other object like a tree, this has to do with how we define things…. |  |  |
| 3.2.2.1 | Visibility of a mark | ENG |  |  |  |  |  |  |
| 3.2.2.2 | Range of a visual mark | ENG |  |  |  |  |  |  |
| 3.2.3 | Lights | ENG |  |  |  | Update with LED? Challenges ? |  |  |
| 3.2.3.1 | PHOTOMETRY | ENG |  |  |  |  |  |  |
| 3.2.3.2 | Rhythms and characters | ENG |  |  |  | \*VERIFY RECOMMENDATIONS IN TEXT |  |  |
| 3.2.3.3 | Background lighting | Eng |  |  |  | Design feature – consideration – verify final text |  |  |
| 3.2.3.4 | Glare | Eng |  |  |  | Design feature – consideration – verify final text |  |  |
| 3.2.3.8 | Meteorlogical optical range | Eng |  |  |  |  |  |  |
| 3.2.4 | Miscellaneous | ENG |  |  |  | Conspicuity  Suggest changing the title |  |  |
| 3.2.4.1 | Audible signals | ENG |  | For technical, review WG 1 for the design and operational requirement  Range - ENG |  | p. 47 examples of audible could be added to beginning of doc as more examples then horns |  |  |
| 3.2.4.2 | Illumination of structures | ENG |  | Refer to guideline |  | Sweden- lighted aid and illuminate daymarks - safer  Heritage lighthouse  Guideline 1061  MBS aligned  Not reflected outward |  |  |
| 3.2.4.3 | Reflective materials | ENG | eng |  |  |  |  |  |
| 3.3 | Visual Aids to Navigation Technology | ENG |  |  |  | Perhaps indicate that LED have some limitations, frequency disruption and visibility  Probably for the guideline or recommendation and update with reference |  |  |
| 3.3.1 | DAYMARKS | ENG |  |  |  | Refers to day board in the first sentence, be consistent with wording |  |  |
| 3.3.2 | Light sources | ENG |  |  |  | Illuminating structures  Example: heritage lighthouses that would not interfere with other systems in the area, can eng propose some wording? Is it here or refer to guideline / recommendation |  |  |
| 3.3.3 | Integrated power supply | ENG |  |  |  |  |  |  |
| 3.4 | Maritime Buoyage System (MBS)  For consultation with wider group:  For example the NAVGUIDE speaks about the MBS, it then describes only some of the marks not all. We suggest that information remains in only one official source, therefore for marks the mbs. Should the NAVGUIDE provide a brief overview of every single mark or should information be removed and refer to the MBS and recommendation/guideline? | ARM | Wg1 | significant |  | Support MBS group title change  Update wording in text if changed in MBS  Update with similar wording (example removal of “In 2020…”  LINE UP with MBS  Significant reference to EWMB  Refer to MBS recommendation 1001 (normative)  Why only response plan guideline?  Do we have 7 marks now?  Change Emergency wreck marking Buoy with just Emergency wreck mark  Talk about the MBS and how to use  IALA needs to create a document with clear updating and reference to guidelines, standards and recommendations |  |  |
| 3.4.1` | Marking new dangers | ARM |  |  |  | Change title to Emergency wreck Mark  Update wording to clearly describe the temporary nature of it  For all of the marks – describe or remove  Or minor description and refer to MBS |  |  |
| 3.4.1 | Lateral Marking System | ENG |  | Is this still a section? |  |  |  |  |
| 3.4.2 | Other marks |  |  |  |  |  |  |  |
| 3.4.2.1 | Leading lines | ENG |  |  |  | Needs review  In Purpose of leading line (7) what does this mean? End of chapter 3 there are the notes (p.62) |  |  |
| 3.4.2.2 | Sector lights | ENG |  |  |  | Review  Pictograms updated |  |  |
| 3.4.2.3 | Fixed marine aids to navigation – lighthouses and beacons | ARM | WG 1 | Review by ENG  Align with MBS |  | Review text  Ensure consistency of Lighthouse or lighthouse  \*if we remove text where does it go? |  |  |
| 3.4.2.4 | Floating marine aids to navigation – major & minor | ARM | WG 1 | Review by ENG |  | Reviewed  Verify reference to recommendation  Validate photos  Paragraph on performance – remove and refer to proper section |  |  |
|  | Technical considerations for floating …  Design…  Moorings  Markings and topmarks | ARM | WG 1 | Review by ENG |  | Could add “Operative” to the title  Refers to “Aid” ensure consistency  Verify references  Review text  Talks about markings, could be confusing, should consider using  identification/ signs  \*mooring design : anchor/sinker  mooring system  position of the anchor/sinker  \*positioning of buoy –  Should be about accuracy and not prescriptive in DGNSS, could say that it is the most common  Either AtoN or marine aids to navigation |  |  |
| 3.4.2 | Cardinal Marking System | ENG |  |  |  |  |  |  |
| 3.4.3 | Isolated Danger Marks | ENG |  |  |  |  |  |  |
| 3.4.4 | Safe Water Marks | ENG |  |  |  |  |  |  |
| 3.4.5 | Special Marks | ENG |  |  |  |  |  |  |
| 3.4.1 | Marking new dangers | ENG |  |  |  |  |  |  |
| 3.4.6 | Emergency Wreck Marking Buoy | ENG |  |  |  |  |  |  |
| 3.4.7 | Other Marks | ENG |  |  |  |  |  |  |
| 3.4 | Level of service | ARM | WG 1 | Moderate |  |  |  |  |
| 8.2 | Level of Service | ARM | WG 1 | Moderate |  |  |  |  |
| 8.4 | Availability Objectives | ARM | WG 1 | Moderate |  |  |  |  |
| 3.5 | Risk management | ARM | WG 3 | Moderate |  |  |  |  |
| 8.3 | Risk Management | ARM | WG 3 | Moderate |  |  |  |  |
| ~~3.6~~ | ~~Quality management~~ | ~~ARM~~ | ~~WG 1~~ | ~~Minimal~~ |  |  |  |  |
| 8.5 | Reviews and Planning | ARM | WG 1 | Minimal |  |  |  |  |
| 8.6 | Quality Management | ARM | WG 1 | Minimal |  |  |  |  |
| 8.7 | Maintenance | ARM | WG 1 | MinimalENG – for comment |  |  |  |  |
| 8.8 | Service Delivery | ARM | WG 1 | moderate |  |  |  |  |
| **Chapter 4 – AtoN design and delivery** | |  |  |  |  |  |  |  |
| 4.1 | Visual signaling | ARM | WG 1 | Minimal |  |  |  |  |
| 4.2 | Range and performance | ARM | WG 1 | Minimal |  |  |  |  |
| 4.3 | Design, implementation and maintenance | ARM | WG 1 | Minimal |  |  |  |  |
| 4.4 | Power systems | ENG | ENG | ENG? |  |  |  |  |
| 7.1 | Types | ENG |  |  |  |  |  |  |
| 7.2 | Electric - Renewable Energy Sources | ENG |  |  |  |  |  |  |
| 7.3 | Rechargeable Batteries | ENG |  |  |  |  |  |  |
| 7.4 | Electrical Loads and Lightning Protection | ENG |  |  |  |  |  |  |
| 7.5 | Non-Electric Energy Sources | ENG |  |  |  |  |  |  |
| 4.5 | Floating AtoN | ARM | WG 1 | Minimal |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 4.6 | Environment and sustainability | ARM | WG 1 | ENG for comment |  |  |  |  |
| 8.9 | Environment | ENG |  |  |  |  |  |  |
| 4.7 | Heritage and legacy | ENG | ENG | Minimal ARM WG 1 FOR COMMENT |  |  |  |  |
| 8.10 | Preservation of Historic Marine Aids to Navigation | ENG |  |  |  |  |  |  |
| **Chapter 5 – Radionavigation services** | | | |  |  |  |  |  |
| 5.1 | Satellite positioning and timing | ENG | ENG |  |  |  |  |  |
| 5.2 | Terrestrial radio positioning and timing | ENG | ENG |  |  |  |  |  |
| 5.3 | RACON and radar positioning | ENG | ENG | Minimal |  |  |  |  |
| 5.4 | Augmentation services including SBAS and GBAS | ENG | ENG | eNav component |  |  |  |  |
| **Chapter 6 - Vessel Traffic Services** | |  |  |  |  |  |  |  |
| 6.1 | VTS implementation | VTS |  |  |  |  |  |  |
| 6.2 | VTS operations | VTS |  |  |  |  |  |  |
| 6.3 | VTS data and information management | VTS |  |  |  |  |  |  |
| 6.4 | VTS communications | VTS |  |  |  |  |  |  |
| 6.5 | VTS technologies | VTS |  |  |  |  |  |  |
| 6.6 | VTS auditing and assesing | VTS |  |  |  |  |  |  |
| 6.7 | VTS additional services | VTS |  |  |  |  |  |  |
| 5.1 | Introduction | VTS |  |  |  |  |  |  |
| 5.2 | Purpose | VTS |  |  |  |  |  |  |
| 5.3 | Definition | VTS |  |  |  |  |  |  |
| 5.4 | IALA VTS Manual | VTS |  |  |  |  |  |  |
| 5.5 | Objectives | VTS |  |  |  |  |  |  |
| 5.6 | Functions | VTS |  |  |  |  |  |  |
| 5.7 | Types of Service in VTS | VTS |  |  |  |  |  |  |
| 5.8 | Surveillance Requirements | VTS |  |  |  |  |  |  |
| 5.9 | Equipment Requirements | VTS |  |  |  |  |  |  |
| 5.10 | Personnel | VTS |  |  |  |  |  |  |
| 5.11 | Promulgation of information | VTS |  |  |  |  |  |  |
| 5.12 | Summary | VTS |  |  |  |  |  |  |
| **Chapter 7 – Training and certification** | |  |  |  |  |  |  |  |
| 7.1 | Training and assessment | ARM | WWA |  | WWA |  |  |  |
| 7.2 | Competency certification and revalidation | ARM | WWA |  | WWA |  |  |  |
| 7.3 | Simulation in training | ARM | WG 3 |  | WWA |  |  |  |
| 7.4 | Human factors and ergonomics | ARM | WG 3 |  | WWA |  |  |  |
| 8.11 | Human Resources Challenges | ARM | WG3 |  | WWA |  |  |  |
| 7.5 | Capacity building | ARM | WWA |  | WWA |  |  |  |
| 7.6 | Model courses | ARM | WWA |  | WWA |  |  |  |
| **Chapter 8 – Digital communication technologies** | |  |  |  |  |  |  |  |
| 8.1 | Wide/medium bandwith systems | ENG |  |  |  |  |  |  |
| 8.2 | Narrow bandwidth systems | ENG |  |  |  |  |  |  |
| 8.3 | Harmonized maritime connectivity | ARM | WG 2 |  |  |  |  |  |
| **Chapter 9 – information serivices** | | |  |  |  |  |  |  |
| 9.1 | Data models and data encoding | ARM | WG 2 |  |  |  |  |  |
| 9.2 | Data exchange systems | ARM | WG 2 |  |  |  |  |  |
| 9.3 | Terminology symbology and portrayal | ARM | WG 2 |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| **Chapter 10 – other services** | | | |  |  |  |  |  |
| 6.1 | Pilotage | ARM | WG 1 | Minimal – moderate  Verify with international community, IMO resolutions accuracy |  |  |  |  |
| 6.2 | Ships Routeing | ARM | WG 1 | ? |  |  |  |  |
| 6.3 | Minimum Comprehensive Mix of AtoN for Channels and Waterways | ARM | WG 1 | Minimal – moderate |  |  |  |  |
| 6.4 | The Marking of Man-Made Offshore Structures | ARM | WG 1 | Moderate |  |  |  |  |
| 6.5 | Nautical Publications | ARM | WG 1 | Significant |  |  |  |  |
| 6.6 | Tide Gauges and Current Meters | ENG |  | Perhaps this should go to IHO |  |  |  |  |
| 6.7 | Under Keel Clearance Management Systems | ARM | WG 1 | Moderate – external support, IMO, PIANC |  |  |  |  |
| 4 | Chapter 4 – e Navigation (Digital at sea) |  |  | Pull some info into the other sections |  |  |  |  |
| 4.1 | Introduction | ENAV |  |  |  |  |  |  |
| 4.2 | Background | ENAV |  |  |  |  |  |  |
| 4.3 | IMO's strategy for the development and implementation of e-navigation | ENAV |  |  |  |  |  |  |
| 4.4 | IALA's Role | ENAV |  |  |  |  |  |  |
| 4.5 | Maritime Service Portfolios | ENAV |  |  |  |  |  |  |
| 4.6 | Maritime Digital Infrastructure | ENAV |  |  |  |  |  |  |
| 4.7 | Communications | ENAV |  |  |  |  |  |  |
| 4.8 | Positioning, Navigation and Timing | ENAV |  |  |  |  |  |  |
| 4.9 | Testbeds | ENAV |  |  |  |  |  |  |