**Recommendations Plan – Working paper**

2017-01-13, revised 2017-02-08 , from PAP33-10.2 revised at PAP34

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| Indicates **NEW** or amended Recommendation is required | Indicates action needed, or a new or amended Guideline, etc. |
| Some items are from earlier PAP work, some are new from DSG. | |

| **Standard** | **Topic area** | **Reference** |  | **Recommendation** | **Comment** |
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| **IALA1010**  **AtoN Planning and Service Requirements** | **Aids to Navigation planning** | R1001 | **Normative** | **The Maritime Buoyage System** | WP 2018-2022 will revise MBS |
|  |  | R0111  E-111 | **Normative** | Port Traffic Signals |  |
|  |  | R0113  O-113 | **Normative** | The Marking of Fixed Bridges and Other Structures over Navigable Waters |  |
|  |  | R0139  O-139 | **Normative** | The Marking of Man-Made Offshore Structures |  |
|  |  | R1010 | Informative | **The involvement of maritime authorities in Marine Spatial Planning** |  |
|  | **Obligations and regulatory compliance** | R1xxx  NEW |  | **The need for a national competent authority for marine aids to navigation and vessel traffic services** | New Guideline(s) describing purpose, management, legislation needs, regulation needs, perhaps with examples of legislation and regulation clauses to assist understanding.  WWA teaches its students in this area but we have no Recommendation or Guideline. |
|  |  | R1xxx  **NEW** | **Normative** | **The international obligations of competent authorities**  IMO SOLAS, UNCLOS, EU Directives, etc. | New supporting Guideline detailing references and obligations.  WWA teaches in this area but we have no Recommendation or Guideline. |
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|  | **Levels of service** | R0130  O-130 | **Normative** | Categorisation and Availability Objectives for Short Range Aids to Navigation |  |
|  | **Risk Management** | R1002 | **Normative** | **Risk Management for Marine Aids to Navigation** | Guidelines on:   1. RAMS (to be completed ARM7) 2. Prepare for future IALA-approved risk analysis software that directly accesses and uses our stored IALANET AIS data |
|  |  | R0142  E-142 | Informative | Maritime Data Sharing 'IALA-NET'   * New title **“Maritime data sharing for risk assessment and analysis”** | Revise this Recommendation to note the storage and use of historical [AIS and other] data for risk analysis.  Guideline(s) on:   * How to connect to IALA net * Data format(s) |
|  |  | R0138  O-138 | Informative | The Use of GIS and Simulation by Aids to Navigation Authorities | Simulation recommendation and associated guidelines will be reviewed in wp 2018-2022 |
|  |  | R1003 | Informative | Marine data sharing for Risk assessment analyses | Under development? |
|  |  | **R1009** | **Informative** | Disaster recovery |  |
|  |  | **R1015** | **Normative** | Marking of Hazardous Wrecks | Awaiting C65 approval |
|  |  | **R1016** | **Normative** | Mobile AtoN (MAtoN) | Awaiting C65 approval |
|  | **Quality management** | R0132  O-132 | **Normative** | Quality Management for Aids to Navigation Authorities |  |
|  |  | R0118  O-118 | **Normative** | The Recording of Aids to Navigation Positions |  |
|  | **Virtual marking** | R0143  O-143 | Informative | Provision of Virtual Aids to Navigation | Will be updated in WP2018-2022 |

| **Standard** | **Topic area** | **Reference** |  | **Recommendation** | **Comment** |
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| **IALA1020**  **AtoN Design and Delivery** | **Visual AtoN** | R0106  E-106 | Normative | The Use of Retroreflecting Material On Aids To Navigation Marks Within The IALA Maritime Buoyage System |  |
|  |  | R0108  E-108 | **Normative** | The Surface Colours used as Visual Signal on Aids to Navigation |  |
|  |  | R0110  E-110 | **Normative** | The Rhythmic Characters of Lights on Aids to Navigation |  |
|  |  | R0112  E-112 | **Normative** | Leading Lights | Will be updated in WP2018-2022 |
|  |  | R1201  E-200-1 | **Normative** | Marine Signal Lights - Colours |  |
|  |  | R0104  O-104 | **Normative** | Off Station Signals for Major Floating Aids |  |
|  | **Range and Performance** | R0200  E-200-0 | **Informative** | Marine Signal Lights Overview | May be converted into Guideline |
|  |  | R1202  E-200-2 | **Normative** | Marine Signal Lights Calculation, Definition and Notation of Luminous Range | Revised Recommendation to C65 |
|  |  | R1203  E-200-3 | **Normative** | Marine Signal Lights Performance | Recommendation to be revised ENG8 |
|  |  | R1204  E-200-4 | **Normative** | Marine Signal Lights - Determination and Calculation of Effective Intensity | Revised Recommendation to C65 |
|  |  | E-200-5 |  | Marine Signal Lights Part 5 - Estimation of the Performance of Optical Apparatus | Becomes a Guideline WP2018-2022 |
|  |  | R0109  E-109 | Informative | The Calculation of the Range of a Sound Signal |  |
|  | **Design, Implementation & Maintenance** | R0126  A-126 | Informative | Use of the AIS **Aid to Navigation** in Marine Aids to Navigation Service | * Change title to make clear that it is AIS AtoN * Consider to split into Recommendation and Guideline * Make sure it is compatible with the new VDES documents below |
|  |  | Rxxxx | Normative | New recommendation on the responsible design and maintenance of AtoN |  |
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|  | **Floating AtoN** | R0107  E-107 | Informative | Moorings for Floating Aids to Navigation |  |
|  | **Environment, Sustainability & Legacy** | R1004 | Informative | Environmental management in the provision of Marine aids to navigation |  |
|  |  | R1005 | Informative | **Conserving the built heritage of lighthouses and other aids to navigation** |  |
|  | **Power systems** |  |  |  |  |
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| **Standard** | **Topic area** | **Reference** |  | **Recommendation** | **Comment** |
| **IALA1030**  **Radionavigation Services** | **Satellite positioning and timing** | R1xxx  **NEW** | Informative | **SBAS augmentation for maritime use** | EGNOS, other national WAS, and existing ENAV work to date may inform a Guideline. |
|  | **Terrestrial positioning and timing** | R1xxx  **NEW** | Informative | **Terrestrial radionavigation systems**  Can note the IMO multi-sensor receiver for SOLAS ships (NCSR/MSC) | Supporting Guidelines   1. eLoran. (Refer to an RTCM document?) 2. R-Mode operation of MF broadcasting stations 3. R-Mode use of AIS signals 4. Intelligent radar beacons (racons) 5. Guidelines for the creation or use of other emissions as the need arises, e.g Signals of Opportunity |
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|  |  | R1011 | Normative | The performance and monitoring of eLoran services in the frequency band 90-110 kHz |  |
|  | **RACON & Radar positioning** | e-NAV-146 |  | Maintaining Racon Service Capability | * Change title * Revision needed. * Becomes Guideline under IALA1030 below |
|  |  | R1006  R-101 | **Normative** | Marine Radar Beacons (racons) | * Check content * E-NAV-146 becomes a Guideline under this Recommendation |
|  | **Augmentation services** | R0115  R-115 | **Normative** | The Provision Of Maritime Radionavigation Services In The Frequency Band 283.5-315 kHz In Region 1 and 285-325 kHz In Region 2 And 3 |  |
|  |  | R0121  R-121 | **Normative** | The Performance and Monitoring of DGNSS Services in the Frequency Band 283.5 - 325 kHz |  |
|  |  | R0150  R-150 | Informative | DGNSS service provision upgrade and future use | * Does this need revision? * Merge with R-135? * Do we need to mention R-mode here too? |
|  |  | R-135 |  | The Future of DGNSS | * Should be guideline, do not list in standard * Is it still valid? Add R-Mode? * Withdraw this document? |
|  |  | R-129 |  | GNSS Vulnerability and Mitigation Measures | * Becomes a Guideline under IALA1030 above. * Maybe some text from R-129 can inform Recommendation above |

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| **Standard** | **Topic area** | **Reference** |  | **Recommendation** | **Comment** |
| **IALA1040**  **Vessel Traffic Services** | **VTS implementation** | R0102  V-102 | Informative | The application of the 'User Pays' principle to Vessel Traffic Services |  |
|  |  | R0119  V-119 | **Normative** | The Implementation of Vessel Traffic Services |  |
|  |  | R0120  V-120 | Informative | Vessel Traffic Services in Inland Waters |  |
|  | **VTS operations** | R0127  V-127 | **Normative** | Operational Procedures for Vessel Traffic Services |  |
|  | **VTS data and information management** | R0125  V-125 | **Normative** | The use and presentation of symbology at a VTS centre |  |
|  |  | R1014 | **Normative** | Portrayal of VTS information and data |  |
|  | **VTS communications** | R1012 | **Normative** | VTS Communications |  |
|  |  | R1xxx  **NEW** | **Normative** | **Digital information transfer between ship and shore in VTS operations (Operational aspects)** | See IALA1070 for a separate technical Recommendation to cover message format, communications channels, etc.  Covers:   * Maritime safety information (MSPs) * Route information transfer (route exchange) * Other? |
|  | **VTS technologies** | R0128  V-128 | **Normative** | Operational and Technical Performance of VTS Systems |  |
|  | **VTS Auditing and assessing** | R1013 | **Normative** | **Auditing and Assessing Vessel Traffic Services** |  |
|  | **VTS additional services** |  |  |  |  |

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| **Standard** | **Topic area** | **Reference** |  | **Recommendation** | **Comment** |
| **IALA1050**  **Training and Certification** | **Training and assessment** | R0141  E-141 | **Normative** | Training and Certification of AtoN Personnel |  |
|  |  | R0103  V-103 | **Normative** | Training and Certification of VTS Personnel |  |
|  | **Accreditation, competency, certification and revalidation** | R0149  O-149 | **Normative** | Accreditation of Training Organisations |  |
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|  | **Capacity building** |  |  |  |  |
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| **Standard** | **Topic area** | **Reference** |  | **Recommendation** | **Comment** |
| **IALA1060**  **Digital Communication Technologies** |  | R1xxx  **NEW** | **Normative** | **Communications channels for [public service] digital information services in coastal areas.**   * Single new Recommendation on (free-to-air, non-commercial) communications channels to be used by coastal authorities for digital information transfer between ship and shore in coastal areas * Absorb A-123 and A-124? | Explains/recommends our plan/vision in a single document.  Supporting Guidelines would cover   * VDES Including AIS * NAVDAT on 500KHz * Future possibility of [NAVDAT} on 300KHz * Other?   **Alternative** following is preferable  See IALA1070 below for a separate Recommendation with Guidelines for data models for these channels. |
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|  | **Wide/Medium bandwidth systems (AIS & VDES)** | R1007 | **Normative** | **The VHF Data Exchange System (VDES) for shore infrastucture** |  |
|  |  | R0123  A-123 | **Normative** | The Provision of Shore Based Automatic Identification System (AIS) |  |
|  |  | R1008  ~~A-124~~  NEW |  | The AIS Service | ~~Supporting Guideline~~  Move recommendation A-124 content to Recommendation R1008 remainder to Guideline(s) |
|  |  | ~~A-124 APPENDIX 0 to APPENDIX 19~~ |  |  | A-124 APPENDIX 0 to APPENDIX 19 become Guidelines for Recommendation R1008 |
|  | **Narrow bandwidth systems (NAVDAT, MF beacons)** | R1xxx  **NEW** | **Normative** | **NAVDAT for MSI broadcast** | Supporting Guideline   * 500KHz * Other channels (MF beacons?) |
|  | **Harmonised maritime connectivity framework (CMDS)**  **Maritime Internet of Things (Intelligent sensors, AtoN monitoring)** | R1xxx  **NEW** | Informative | **Maritime Resource Numbering** | Will apply to [Maritime Cloud] and elsewhere in the maritime environment |
|  |  | R0140  e-NAV-140 | Informative | e-Navigation architecture |  |
|  |  | R0148  e-NAV-148 | Informative | The need to implement regional e-Navigation solutions based on international standards | * Do we still need this document?   Could this be merged with the above? |
|  |  | R1xxx  **NEW** | Informative | **Framework for harmonised maritime connectivity** | * Placeholder for the Maritime Cloud. * Name, content, need, etc., will become clearer in late 2017 or early 2018 after the E2 workshops. |

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| **Standard** | **Topic area** | **Reference** |  | **Recommendation** | **Comment** |
| **IALA1070**  **Information Services** |  |  |  |  |  |
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|  | **Data models and data encoding (IVEF, S-100, S-200, ASM)** | R1xxx  **NEW** | **Normative** | **Data models for digital information services [for VTS and AtoN services] in coastal areas (Technical)** | Supporting Guidelines covering data models and their management   * S200 series * E-NAV 147 as Guideline * Application Specific Messages * Route exchange/route transfer * Maritime Service Portfolios * Time stamps for maritime data |
|  |  | e-NAV-144 | **Normative** | Harmonized implementation of Application Specific Message (ASM) | Merge into Recommendation and its Guidelines |
|  |  | R0147  e-NAV-147 | **Normative** | Product Specification Development and Management | Merge into Recommendation and its Guidelines |
|  |  | R0145  V-145 | **Normative** | The Inter-VTS Exchange Format (IVEF) Service | Split into Recommendation and Guideline |
|  | **Data exchange systems (Traffic Information)** |  |  |  |  |
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|  | **Terminology, symbology and portrayal** |  |  |  |  |