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| ENG Committee  Work programme task register |
|  |
| 2018 – 2022 |



ENG9-6.2.1

**Document Revision**

Revisions to the IALA Document are to be noted in the table prior to the issue of a revised document

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| **Date** | **Page / Section Revised** | **Requirement for Revision** |
| 27 July 2018 | New Document | Draft for consideration at ENG8 |
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**Purpose of this Document**

The purpose of this document is to maintain a register of ENG Committee Work Programme Tasks for 2018-26 which describes:

* The current status of each Task
* How the Task is linked to IALA’s Strategic Alignment
* Key changes to the Task during its development

Note: A copy of IALA’s Strategic Vision 2018-26 is at Annex 1.

**Table of Contents**

Table of Contents

[1.1.1 Review and update Guideline 1097 on Technical features and Technology relevant for Simulation of AtoN 6](#_Toc527638062)

[1.2.1 Develop Guidance on checking that 3rd party AtoN providers are providing what they are obliged to provide– 3rd party AtoN provider quality control. (Joint ARM cooperation) 7](#_Toc527638063)

[2.1.1 Update E-111 Port Traffic Signals 8](#_Toc527638064)

[2.1.2 Develop Guideline on Port Traffic Signals 9](#_Toc527638065)

[2.1.3 Develop E-112 Leading Lights and 1023 Leading Lines into a Guideline 10](#_Toc527638066)

[2.1.4 Complete Guideline 1061 Illumination of structures 11](#_Toc527638067)

[2.1.5 Update Guideline 1048 LED technologies and their use in signal lights 12](#_Toc527638068)

[2.1.6 Review & update guideline 1043 on Light sources 13](#_Toc527638069)

[2.1.7 Develop a guideline for E-106 Retroreflective materials 14](#_Toc527638070)

[2.2.1 Develop E200-3 on measurement into a Guideline 15](#_Toc527638071)

[2.2.2 Develop new recommendation on marine light Terms of Measurement 16](#_Toc527638072)

[2.2.3 Develop E200-5 on Optical Performance into a Guideline 17](#_Toc527638073)

[2.2.4 Revise Guideline on effective intensity 18](#_Toc527638074)

[2.2.5 Develop Guidance on monitoring of function and degradation of AtoN light sources 19](#_Toc527638075)

[2.2.6 Develop Guidance on service factors 20](#_Toc527638076)

[2.2.7 Develop Guidance on Colour fading of AtoN (plastic and painted) – methods to measure and assess 21](#_Toc527638077)

[2.2.8 Finish guideline G1133 Marine Signal Lights - Calculation of Luminous Intensity and Range 22](#_Toc527638078)

[2.2.9 Update Guideline 1041 on Sector Lights 23](#_Toc527638079)

[2.3.1 Develop guidance to identify appropriate standards for AtoN equipment with extreme environmental conditions. Humidity, temperature, enclosure ratings, UV etc) Also including peak intensity specification for LED AtoN, batteries, optic service factor, thermal cap, etc. 24](#_Toc527638080)

[2.3.2 Complete guidance on Maintenance of AtoN structures 25](#_Toc527638081)

[2.3.3 Develop Guideline on Tidal flow data capture and display 26](#_Toc527638082)

[2.3.4 New Recommendation on the Responsible Design & Maintenance of AtoN 28](#_Toc527638083)

[2.3.5 Joint workshop with all 4 technical committees on Cyber Security in AtoN operations 29](#_Toc527638084)

[2.4.1 Develop Guidance on what constitutes a good marine AtoN solar panel 30](#_Toc527638085)

[2.4.2 Deliver a Workshop - IALABATT/ IALALITE 31](#_Toc527638086)

[2.4.3 Monitor Battery development for use in AtoN 32](#_Toc527638087)

[2.5.1. Develop guidance on quantifying buoy characteristics to meet nautical and operational requirements and ways to verify them 33](#_Toc527638088)

[2.5.2. Develop new guideline on radar reflector (reflection) properties 34](#_Toc527638089)

[2.5.3. Creating an overview guideline on floating AtoN 35](#_Toc527638090)

[2.6.1 Develop Guidance on modern equipment in traditional lighthouses 36](#_Toc527638091)

[2.6.2 Monitor Climate Change to inform IALA of impact and potential adaptation requirements for AtoN providers 37](#_Toc527638092)

[2.6.3 Establish a World Heritage Lighthouse Cyber Centre, accessible via the IALA website 38](#_Toc527638093)

[2.6.4 Establish a database on World Heritage Lighthouses 39](#_Toc527638094)

[2.6.5 Establish a concept for nominating one lighthouse as World Heritage Lighthouse of the year for each ‘World AtoN Day’ 40](#_Toc527638095)

[2.6.6 Deliver Heritage Workshop 41](#_Toc527638096)

[2.7.1 Revise Recommendation R1004 to reference the UN Sustainable Development Goals 42](#_Toc527638097)

[3.1.1 Resilient PNT (applicable to all techical domains) – (identification, potential impact and mitigations) 43](#_Toc527638098)

[3.2.1 Terrestrial radionavigation systems 44](#_Toc527638099)

[3.2.2 R-Mode (MF) 45](#_Toc527638100)

[3.2.3 R-Mode (AIS/VDES) 46](#_Toc527638101)

[3.2.4 Workshop on R-Mode in 2019 47](#_Toc527638102)

[3.2.5 R-Mode testbed progress coordination 49](#_Toc527638103)

[3.2.6 Develop and maintain relevant Product Specifications eg. S-245 eLoran ASF data, S-246 eLoran transmitting station alamanc, S-247 Differential Loran reference station etc. 51](#_Toc527638104)

[3.2.7 Guidance on timing and synchronisation 52](#_Toc527638105)

[3.3.1 eRacon (standard approach) ; Review recommendations ENAV146 & R-101 & Guideline 1010 53](#_Toc527638106)

[3.4.1 Consideration of how and when to use SBAS in maritime. 54](#_Toc527638107)

[3.4.2 Review existing DGNSS infrastructure and provide guidance for current system 56](#_Toc527638108)

[3.4.3 New Recommendation on augmentation for maritime use 57](#_Toc527638109)

[3.4.4 Provide guidance, strategy and advice on potential new uses of marine beacon DGNSS infrastructure 58](#_Toc527638110)

[3.4.5 High accuracy systems 59](#_Toc527638111)

[3.5.1 Review and update current documentation under the preview of PNT WG 60](#_Toc527638112)

[3.5.2 Monitor developments in GNSS, DGNSS, radar, resilient PNT, e-Pelorus, terrestrial systems, R-Mode, inertial and any other relevant areas etc. 61](#_Toc527638113)

[3.6.1 Update to ITU M.823, potential replacement for A.915, Liaison with IMO, ITU, RTCM, etc on related topics and project areas 62](#_Toc527638114)

[3.7.1 Input to MSP, Integrity considerations for resilient PNT, cybersecurity impact for PNT data, DATUM considerations 63](#_Toc527638115)

[4.1.1 Development and review of WWA courses 64](#_Toc527638116)

[4.2.1 Navguide updates and review 65](#_Toc527638117)

[5.1.1 Review telemetry Guideline 1008 66](#_Toc527638118)

[5.1.2 Review of engineering support for e-navigation services, (including hot/cold climates & radio propagation). 67](#_Toc527638119)

[Annex 1: IALA’s Strategic Vision 2018-2026 68](#_Toc527638120)

| **ENG Committee – 2018-22 Work Programme** | | | | |
| --- | --- | --- | --- | --- |
| **TASK** | 1.1.1 Review and update Guideline 1097 on Technical features and Technology relevant for Simulation of AtoN | | | |
| Objectives of the task | Update the Guideline 1097 and propose to ARM a review on the Guideline 1058 by using current experience of AtoN simulation linking to the IALA Risk Management Tollbox | | | |
| Expected outcome | A revised version of G1097 on the technical aspects of Simulation Technology  Liaison note to ARM with proposed update to Guideline 1058 | | | |
| Strategic Alignment | **Goal: G1**  **Strategy: S1** | | | |
| Scope (Describe key items that are in scope/out of scope) | To incorporate information in document ENG5-10.38 into Guideline 1097  Generic document to cover all Aton Simulator with a focus on technical aspects, operational aspects will be proposed to ARM | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones / Remaining key milestones for completing the task include:   * Collecting relevant experiences and examples form authorities and service providers * Identify essential aspect for contract * Identify risks * Provide checklists and examples if suitable * involve contributions from ARM-committee | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
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| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 1.2.1 Develop Guidance on checking that 3rd party AtoN providers are providing what they are obliged to provide– 3rd party AtoN provider quality control. (Joint ARM cooperation) | | | |
| Objectives of the task | To provide guidance on quality control of 3rd party AtoN provider and 3rd party providers of services related to AtoN. | | | |
| Expected outcome | Development of a new guideline for quality control of 3rd party AtoN provider and 3rd party providers of services related to AtoN.  The new guideline should cover 3rd party aspects in addition to the existing guideline G1052 (Quality management systems for aids to navigation service delivery). | | | |
| Strategic Alignment | **Goal: G1**  **Strategy: S1** | | | |
| Scope (Describe key items that are in scope/out of scope) | Competent authorities are contracting out single or multiple tasks of AtoN provision to other providers. The guideline should inspire the competent authorities on factors to be clarified in the tender and contract as e.g. new risks that will occur, how to keep the technical knowledge available in the authority, how to find the “good guys” …  It may include practical examples (good as well as bad) and checklists e.g. minimum requirements to   * 3rd parties equipment, staff (training, certificates), quality management system * key performance indicators, quality checks, guaranties, penalties | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  +  +  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones / Remaining key milestones for completing the task include:   * Collecting relevant experiences and examples form authorities and service providers * Identify essential aspect for contract * Identify risks * Provide checklists and examples if suitable * involve contributions from ARM-committee | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
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| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 2.1.1 Update E-111 Port Traffic Signals | | | |
| Objectives of the task | Provide national members with a recommendation on Port Traffic Signals taking into account modern practice. | | | |
| Expected outcome | A revised recommendation along with a guidance document to provide details on how to achieve the recommended signal codes | | | |
| Strategic Alignment | **Goal: G1**  **Strategy: S1, S3** | | | |
| Scope (Describe key items that are in scope/out of scope) | Review the signal codes with input from VTS and ARM.  The expected number of sessions is based on ‘one session’ feedback from VTS and ARM that the standard code is in use and doesn’t need changing. The remaining sessions are to develop the guidance document. | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  +  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones / Remaining key milestones for completing the task include:   * Draft Liaison note to ARM and VTS on the present use of Port Traffic Signals (ENG8) * Review feedback from ARM & YTS to inform full scope of work * Update Recommendation * Draft guidance on how to achieve signal codes | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
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| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 2.1.2 Develop Guideline on Port Traffic Signals | | | |
| Objectives of the task | In line with IALA strategy this task will review and update the recommendation and guideline to reflect modern best practice and agreed methodology. To produce a high level recommendation with detailed guidance on how to achieve it | | | |
| Expected outcome | A new recommendation with revised guidance and a tool (excel spread sheet or similar) to assist in the calculation of geometry, intensities and day board size. | | | |
| Strategic Alignment | **Goal: G1**  **Strategy: S1** | | | |
| Scope (Describe key items that are in scope/out of scope) | In - Front and rear day time and night time operation.  Out - Means of construction (base, materials, stresses, etc.) | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones for completing the task include:   * Complete G1133 before starting * Review and understand the existing recommendation and guideline * Make recommendation high level removing formulas * Provide detailed guidance on calculation principles and examples * Revise and publish excel spread sheet calculator | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
|  |  |  |  |

| **ENG Committee – 2018-22 Work Programme** | | | | |
| --- | --- | --- | --- | --- |
| **TASK** | 2.1.3 Develop E-112 Leading Lights and 1023 Leading Lines into a Guideline | | | |
| Objectives of the task | In line with IALA strategy this task will review and update the recommendation and guideline to reflect modern best practice and agreed methodology. To produce a high level recommendation with detailed guidance on how to achieve it | | | |
| Expected outcome | A new recommendation with revised guidance and a tool (excel spread sheet or similar) to assist in the calculation of geometry, intensities and day board size. | | | |
| Strategic Alignment | **Goal: G1**  **Strategy: S1** | | | |
| Scope (Describe key items that are in scope/out of scope) | In - Front and rear day time and night time operation.  Out - Means of construction (base, materials, stresses, etc.) | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones for completing the task include:   * Complete G1133 before starting * Review and understand the existing recommendation and guideline * Make recommendation high level removing formulas * Provide detailed guidance on calculation principles and examples * Revise and publish excel spread sheet calculator | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
|  |  |  |  |

| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 2.1.4 Complete Guideline 1061 Illumination of structures | | | |
| Objectives of the task | Although the Guideline is published and contains a number of examples, it lacks a clear definition of the formula and calculation required to provide the correct levels of illumination. | | | |
| Expected outcome | Updated guidance with a detailed methodology for determining the required levels of light to meet any expected nautical requirement. | | | |
| Strategic Alignment | **Goal: G1**  **Strategy: S1** | | | |
| Scope (Describe key items that are in scope/out of scope) | In – structures used as an AtoN  This work is considered the lowest priority in the work program | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones for completing the task include:   * Add CIE formula for flood lighting * DIALUX software (FH WSV) * RELUX software (Switzerland) | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
|  |  |  |  |

| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 2.1.5 Update Guideline 1048 LED technologies and their use in signal lights | | | |
| Objectives of the task | Provide members with the latest in LED technology | | | |
| Expected outcome | Updated Guidance | | | |
| Strategic Alignment | **Goal: G1, G2**  **Strategy: S1, S3** | | | |
| Scope (Describe key items that are in scope/out of scope) | Merge with 1043 and 1049 | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones for progressing the task include:   * Update and revise * Provide the latest industry information | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
|  |  |  |  |

| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 2.1.6 Review & update guideline 1043 on Light sources | | | |
| Objectives of the task | (As Task 2.1.5) Provide members with the latest in LED technology | | | |
| Expected outcome | Updated Guidance | | | |
| Strategic Alignment | **Goal: G1, G2**  **Strategy: S1, S3** | | | |
| Scope (Describe key items that are in scope/out of scope) | Merge with 1043 and 1049 | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones for progressing the task include:   * Update and revise * Provide the latest industry information | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
|  |  |  |  |

| **ENG Committee – 2018-22 Work Programme** | | | | |
| --- | --- | --- | --- | --- |
| **TASK** | 2.1.7 Develop a guideline for E-106 Retroreflective materials | | | |
| Objectives of the task | Proved members with guidance on the use of retroreflectors to enhance the recognition of daymarks during night time conditions | | | |
| Expected outcome | New Guideline | | | |
| Strategic Alignment | **Goal: G1**  **Strategy: S1** | | | |
| Scope (Describe key items that are in scope/out of scope) |  | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones for completing the task include:   * Description of retroreflective materials * Guidance on the use of such materials | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
|  |  |  |  |

| **ENG Committee – 2018-22 Work Programme** | | | | |
| --- | --- | --- | --- | --- |
| **TASK** | 2.2.1 Develop E200-3 on measurement into a Guideline | | | |
| Objectives of the task | To provide members with guidance on light measurement principles and techniques | | | |
| Expected outcome | New Guideline | | | |
| Strategic Alignment | **Goal: G1**  **Strategy: S1** | | | |
| Scope (Describe key items that are in scope/out of scope) | In – photometry, spectrometry  Out - | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones for completing the task include:   * Clarify and agree whether definitions are extant for modern practices * Draft guideline | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
|  |  |  |  |

| **ENG Committee – 2018-22 Work Programme** | | | | |
| --- | --- | --- | --- | --- |
| **TASK** | 2.2.2 Develop new recommendation on marine light Terms of Measurement | | | |
| Objectives of the task | Review existing terminology and review | | | |
| Expected outcome | New recommendation | | | |
| Strategic Alignment | **Goal: G1**  **Strategy: S1** | | | |
| Scope (Describe key items that are in scope/out of scope) | Excludes the ‘how to’ | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones for completing the task include:   * Requires input from AW * High level description of terms and definitions | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
|  |  |  |  |

| **ENG Committee – 2018-22 Work Programme** | | | | |
| --- | --- | --- | --- | --- |
| **TASK** | 2.2.3 Develop E200-5 on Optical Performance into a Guideline | | | |
| Objectives of the task | Take the existing E-200-5 and make into a Guideline. | | | |
| Expected outcome | New Guideline | | | |
| Strategic Alignment | **Goal: G1**  **Strategy: S1** | | | |
| Scope (Describe key items that are in scope/out of scope) |  | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones for completing the task include:   * Add new information if available * Otherwise transfer all existing data and calculations in to new guideline | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
|  |  |  |  |

| **ENG Committee – 2018-22 Work Programme** | | | | |
| --- | --- | --- | --- | --- |
| **TASK** | 2.2.4 Revise Guideline on effective intensity | | | |
| Objectives of the task | Continue the revision of this guideline during this work session | | | |
| Expected outcome | A new guideline | | | |
| Strategic Alignment | **Goal: G1**  **Strategy: S1** | | | |
| Scope (Describe key items that are in scope/out of scope) |  | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones for completing the task include:   * Review and update draft guideline | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
|  |  |  |  |

| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 2.2.5 Develop Guidance on monitoring of function and degradation of AtoN light sources | | | |
| Objectives of the task | To provide guidance to members on factor affecting performance of light source and monitoring the degradation | | | |
| Expected outcome | A new Guideline or add to G1077 | | | |
| Strategic Alignment | **Goal: G1**  **Strategy: S1** | | | |
| Scope (Describe key items that are in scope/out of scope) |  | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones for completing the task include:   * Provide information on monitoring of Aton light sources * Calculations or autonomous system * Measurement methodology * AW to provide input to ENG9 | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
|  |  |  |  |

| **ENG Committee – 2018-22 Work Programme** | | | | |
| --- | --- | --- | --- | --- |
| **TASK** | 2.2.6 Develop Guidance on service factors | | | |
| Objectives of the task | To provide members criteria on service condition factor to be taken into account during design and maintenance | | | |
| Expected outcome | New guideline or add to G1077 | | | |
| Strategic Alignment | **Goal: G1**  **Strategy: S1** | | | |
| Scope (Describe key items that are in scope/out of scope) |  | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones for completing the task include:   * Expand on the individual contributions of   + Bird fouling, Light source degradation, UV degradation of materials, Salt deposits, Sand and dust   + Time period   + Possible inclusion of a table (minimal, normal, extreme) with a percentage allocation for each   + LP (GRAD) to provide input paper to ENG9 | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
|  |  |  |  |

| **ENG Committee – 2018-22 Work Programme** | | | | |
| --- | --- | --- | --- | --- |
| **TASK** | 2.2.7 Develop Guidance on Colour fading of AtoN (plastic and painted) – methods to measure and assess | | | |
| Objectives of the task | To provide guidance to members on the various aspects of colour degradation over time. | | | |
| Expected outcome | New guideline or add to G1134 | | | |
| Strategic Alignment | **Goal: G1**  **Strategy: S1** | | | |
| Scope (Describe key items that are in scope/out of scope) |  | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  +  44 | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones for completing the task include:   * Measurement methodology – refer to G1134 * Devise assessment plan and period * Monitor Long term test from CCG * Delta E, amount of area to constitute non-compliance. | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
|  |  |  |  |

| **ENG Committee – 2018-22 Work Programme** | | | | |
| --- | --- | --- | --- | --- |
| **TASK** | 2.2.8 Finish guideline G1133 Marine Signal Lights - Calculation of Luminous Intensity and Range | | | |
| Objectives of the task | Complete the guideline to give members information on the calculation and expression of intensity and range | | | |
| Expected outcome | New guideline | | | |
| Strategic Alignment | **Goal: G1**  **Strategy: S1** | | | |
| Scope (Describe key items that are in scope/out of scope) |  | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones for completing the task include:   * New guideline * Include glazing and astragal losses * Include service condition factors | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
|  |  |  |  |

| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 2.2.9 Update Guideline 1041 on Sector Lights | | | |
| Objectives of the task | Update guideline to better define angle of uncertainty | | | |
| Expected outcome | Clearer understanding of angle of uncertainty | | | |
| Strategic Alignment | **Goal: G1**  **Strategy: S1** | | | |
| Scope (Describe key items that are in scope/out of scope) | Only update as per liaison note from ARM (input ENG7-9.8) | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones for completing the task include:   * Revised document | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
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| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 2.3.1 Develop guidance to identify appropriate standards for AtoN equipment with extreme environmental conditions. Humidity, temperature, enclosure ratings, UV etc) Also including peak intensity specification for LED AtoN, batteries, optic service factor, thermal cap, etc. | | | |
| Objectives of the task | Develop Guideline that provides AtoN users with a guide to the appropriate standards and other means of identifying AtoN equipment that is relevant to any specific extreme environmental conditions in which they are to be operated. | | | |
| Expected outcome | Guideline on Standards for AtoN equipment in Extreme Environmental Conditions. | | | |
| Strategic Alignment | **Goal: G1**  **Strategy: S1** | | | |
| Scope (Describe key items that are in scope/out of scope) | Review, develop and finalize Guideline. | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  +  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones / Remaining key milestones for completing the task include:   * Develop Guideline. * Review Guideline. * Finalize for approval. | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
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| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 2.3.2 Complete guidance on Maintenance of AtoN structures | | | |
| Objectives of the task | Provide guidance on maintenance of AtoN structures, protection systems, and repair techniques. | | | |
| Expected outcome | New Guideline. | | | |
| Strategic Alignment | **Goal: G1**  **Strategy: S1** | | | |
| Scope (Describe key items that are in scope/out of scope) | Develop new guideline on Maintenance of AtoN Structures by consolidating relevant information from existing guidelines, additional contributions from experienced engineering managers, and comprising the following key sections:   * Maintenance Principles * Structures, Buildings and Construction Materials * Materials * Hazardous Materials * Building Environment Management   Other Physical and Environmental Considerations | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones / Remaining key milestones for completing the task include:   * Intersessional review of draft Guideline ahead of ENG 9. * Review and finalise content ENG 9 / ENG 10. | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
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| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 2.3.3 Develop Guideline on Tidal flow data capture and display | | | |
| Objectives of the task | To provide guidance on real-time tidal current monitoring and display systems. | | | |
| Expected outcome | Development of a new Guideline for Tidal Current Monitoring and Display Systems.  Improvement of safe and efficient navigation of vessels, and important role in keeping people and the environment safe.   * Guideline on tidal current monitoring and display systems for AtoN * Guideline on tidal current information service for navigational vessels | | | |
| Strategic Alignment | **Goal: G1**  **Strategy: S1** | | | |
| Scope (Describe key items that are in scope/out of scope) | Providing guidance on the installation and operation of tidal current monitoring and display systems, focusing on all aspects, from data collection, through to different technologies, transmission and recording of data and display and availability of data to shipping. | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  +  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones / Remaining key milestones for completing the task include:   * To develop a Guideline on Tidal Current Monitoring. * Identify and provide details of how they are used. * Details of different technologies available for the tidal current monitoring (bottom mounted, side mounted, buoy mounted). * Different types of sensors and the advantages / disadvantages. * Variety of user requirements. * Type of data. * How can it be transmitted? Different methods (GSM / AIS / Signal Boards / VDES). * How often are the transmissions? * Power supplies? * Environmental considerations. * What systems are available now and in the future * Update the system specification documents | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
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| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 2.3.4 New Recommendation on the Responsible Design & Maintenance of AtoN | | | |
| Objectives of the task | Develop a new Recommendation on the need for Members to incorporate sound design principles into installation of new AtoN and to have maintenance systems in place to ensure reliability and performance. | | | |
| Expected outcome | New Recommendation | | | |
| Strategic Alignment | **Goal: G1**  **Strategy: S1** | | | |
| Scope (Describe key items that are in scope/out of scope) | Develop recommendation stating that   * Marine Aids to Navigation require careful design and manufacture in order to provide a reliable service. * Marine Aids to Navigation equipment require appropriate maintenance regimes to perform to design standards. | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones / Remaining key milestones for completing the task include:   * Develop new Recommendation * Review and approve. | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
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| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 2.3.5 Joint workshop with all 4 technical committees on Cyber Security in AtoN operations | | | |
| Objectives of the task | Develop and host a Workshop on Cyber Security | | | |
| Expected outcome | A Cyber Security Workshop with contribution by all 4 committees, but developed jointly by ARM/ENG | | | |
| Strategic Alignment | **Goal: G1**  **Strategy: S1** | | | |
| Scope (Describe key items that are in scope/out of scope) | Develop Workshop with following topics.   * Cyber security update – latest trends and threats. * Potential threats to the security of AtoN systems. * Impacts of cyber security on positioning. * Presentations on real case scenarios. * Technology and protection against cyber security. * A look at cyber security issues in other transport sectors. * Education & training of personnel   Develop Guideline on Cyber Security in provision of AtoN services. | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  +  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones / Remaining key milestones for completing the task include:   * Develop draft Workshop proposal. * Review and revision by ARM * Approval by Council * Identify Host Nation * Plan and implement. * Finalize new Guideline. | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
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| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 2.4.1 Develop Guidance on what constitutes a good marine AtoN solar panel | | | |
| Objectives of the task | Develop guidance for members on identifying the correct solar panel for use in a marine environment. | | | |
| Expected outcome | New Guideline | | | |
| Strategic Alignment | **Goal: G1**  **Strategy: S1** | | | |
| Scope (Describe key items that are in scope/out of scope) | * Develop new guideline. * Provide details and specifications on what is required for a solar panel to perform in the marine environments. * Provide details on maintenance aspects and other technical issues affecting performance. | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones / Remaining key milestones for completing the task include:   * Develop new guideline. * Review in power systems sub group. * Approve. | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
|  |  |  |  |

| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 2.4.2 Deliver a Workshop - IALABATT/ IALALITE | | | |
| Objectives of the task | Develop and host a Workshop on technical developments in AtoN lights, power generation and storage with a focus on the environmental impact linking to the UN Sustainable Development Goals. | | | |
| Expected outcome | * Paper on how to support the UN Sustainable Development Goals whilst delivering an effective AtoN service. * Review and update of Guidelines 1067 (1-3) * Review Solar Power Calculator Guideline1039 * Complete Guideline on Marine Solar panels * Update of Guideline 1036 – Environmental Management | | | |
| Strategic Alignment | **Goal: G1**  **Strategy: S1** | | | |
| Scope (Describe key items that are in scope/out of scope) | * Knowledge sharing in sustainable development * Update IALA guidance on modern lights and power systems. * Promote the use of sustainable power systems * Provide an opportunity to increase technical awareness among members | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones / Remaining key milestones for completing the task include:   * Understand present and emerging technologies in energy supply and storage in AtoN provision with a focus on environmental responsibility * Understand present and emerging technologies on light sources and their application in AtoN * Promote the use of renewable energy in AtoN provision * Sharing operational experiences | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
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| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 2.4.3 Monitor Battery development for use in AtoN | | | |
| Objectives of the task | Provide regular updates to the committee on battery development and the emergence of new battery technologies. | | | |
| Expected outcome | Update by rapporteur each ENG meeting, in form of short presentation. | | | |
| Strategic Alignment | **Goal: G1**  **Strategy: S3** | | | |
| Scope (Describe key items that are in scope/out of scope) | Updates by rapporteur each session. | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  +  +  +  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones for completing the task include:   * Monitoring of updates and new technologies by rapporteur. * Updates to ENG committee each monitoring. * When identified, possible development of new documents or revision of existing. | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
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| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 2.5.1. Develop guidance on quantifying buoy characteristics to meet nautical and operational requirements and ways to verify them | | | |
| Objectives of the task | Nautical requirements like colour, shape, coloured area, light colour, flash character and area of use are normally not sufficient to select the appropriate buoy. Consideration of the inter relationships between operating environment and the buoy properties is necessary. | | | |
| Expected outcome | A new guideline could show the way to specify buoy characteristics based on nautical requirements as well as the measurement and the assessment of the dynamic performance. | | | |
| Strategic Alignment | **Goal: G1**  **Strategy: S1** | | | |
| Scope (Describe key items that are in scope/out of scope) | Develop guideline on quantifying buoy characteristics to meet nautical and operational requirements and ways to verify them | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  +  +  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones / Remaining key milestones for completing the task include:   * Identify nautical requirements * Identify buoy characteristics * Discuss the relationship between nautical requirements and buoy characteristics * Identify measurement methods for the dynamic performance | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
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| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 2.5.2. Develop new guideline on radar reflector (reflection) properties | | | |
| Objectives of the task | A radar reflector is a passive device designed to return the incident radar pulses of electromagnetic energy back towards the source and thereby enhance the response on the radar display.  “IALA Guideline 1111 – Preparation of Operational and Technical Performance Requirements for VTS Systems” provides general information about the anticipated radar reflection of vessels with radar reflectors but does not include information about the different reflector types and their performance.  ISO 8729-1:2010 concerns passive reflectors and gives specifications for the construction, performance, testing, inspection and installation of radar reflectors. In the moment IALA has no appropriate guideline concerning this. | | | |
| Expected outcome | Develop a guideline with an overview of radar reflector types, properties, performance and measurement. | | | |
| Strategic Alignment | **Goal: G1**  **Strategy: S1** | | | |
| Scope (Describe key items that are in scope/out of scope) |  | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  +  +  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones / Remaining key milestones for completing the task include:   * Definition of radar reflectors * Look for the content of IALA Guideline 1111, ISO 8729-1:2010 and other relevant documents/standards * Collect information about the technical background * Classify different radar reflector types, their properties and performance * Define measurement methods | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
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| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 2.5.3. Creating an overview guideline on floating AtoN | | | |
| Objectives of the task | Buoy related information is available in many IALA guidelines and other IALA documents. | | | |
| Expected outcome | Create a guideline “floating marine aids to navigation” with an overview of related guidelines and further documents to floating AtoN | | | |
| Strategic Alignment | **Goal: G1**  **Strategy: S1** | | | |
| Scope (Describe key items that are in scope/out of scope) |  | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  +  +  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones / Remaining key milestones for completing the task include:   * Definition of floating marine aids to navigation * Look for the existing IALA Guidelines and further documents * Creating the guideline | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
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| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 2.6.1 Develop Guidance on modern equipment in traditional lighthouses | | | |
| Objectives of the task | Develop guidance on the installation and operation of modern equipment in traditional lighthouses. | | | |
| Expected outcome | New Guideline | | | |
| Strategic Alignment | **Goal: G1**  **Strategy: S1** | | | |
| Scope (Describe key items that are in scope/out of scope) | * Highlight the possibility of using traditional lighthouses as platforms for modern technology. * Identify the different types of modern equipment that may be installed on traditional lighthouses. * Identify the issues and concerns related to the use of traditional lighthouses. * Identify the need for careful installation. * Refer to other IALA documents on use of modern optics in traditional lighthouses. | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  +  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones / Remaining key milestones for completing the task include:   * Development of the guideline. * Review with WG1 for information on modern optics in traditional lighthouses. * Review and approve. | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
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| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 2.6.2 Monitor Climate Change to inform IALA of impact and potential adaptation requirements for AtoN providers | | | |
| Objectives of the task | Provide regular updates to the Committee on any climate change issues that may affect the provision of AtoN services. | | | |
| Expected outcome | Rapporteur to provide short presentation and update at each ENG meeting. | | | |
| Strategic Alignment | **Goal: G1**  **Strategy: S3** | | | |
| Scope (Describe key items that are in scope/out of scope) | * Intersessional collection of information for presenting at each ENG committee. | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  +  +  +  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones / Remaining key milestones for completing the task include:   * Updates at each ENG session. | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
|  |  |  |  |

| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 2.6.3 Establish a World Heritage Lighthouse Cyber Centre, accessible via the IALA website | | | |
| Objectives of the task | To share information about the world heritage lighthouses in a portal accessible through the IALA website.  To collect and store the information about the world lighthouses | | | |
| Expected outcome | To promote the importance of heritage lighthouses through the sharing of information and availability of online content, accessible through IALA. | | | |
| Strategic Alignment | **Goal: G2**  **Strategy: S3** | | | |
| Scope (Describe key items that are in scope/out of scope) | Designing a cyber centre that fits within the framework of the IALA website, including use of IALAs branding and colour scheme. | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  +  +  +  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones / Remaining key milestones for completing the task include:   * Approval of the concept. * Budget for web development. * Discussin and approval on the website content. * Collection of material from National Members * Design and launch the World Heritage Lighthouse Cyber Centre on the IALA website. | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
|  |  |  |  |

| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 2.6.4 Establish a database on World Heritage Lighthouses | | | |
| Objectives of the task | To collect and consolidate and store information about the world heritage lighthouses | | | |
| Expected outcome | To establish an electronic database of world heritage lighthouses. | | | |
| Strategic Alignment | **Goal: G2**  **Strategy: S3** | | | |
| Scope (Describe key items that are in scope/out of scope) | Collecting the materials on lighthouses submitted by the National Members, particularly through the World Heritage Lighthouse of the Year Competition.  Organizing the database for Lighthouse Heritage | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  +  +  +  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones / Remaining key milestones for completing the task include:   * Inform the plan for the establishment of a database on WHL * Draft the template for the database and assign responsibilities. * Collect the materials on lighthouses from National Members * Organize the materials on lighthouses to establish the World Heritage Lighthouse Cyber Centre | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
|  |  |  |  |

| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 2.6.5 Establish a concept for nominating one lighthouse as World Heritage Lighthouse of the year for each ‘World AtoN Day’ | | | |
| Objectives of the task | To celebrate the year for ‘World AtoN Day’  To promote the importance of heritage lighthouses to the public. | | | |
| Expected outcome | To collect the information about every National Member’s heritage lighthouses  To nominate the World Heritage Lighthouse of the year for **‘World AtoN Day’** | | | |
| Strategic Alignment | **Goal: G2**  **Strategy: S3** | | | |
| Scope (Describe key items that are in scope/out of scope) | * To nominate the World Heritage Lighthouse of the year for ‘World AtoN Day’ from Lighthouses which was submitted by the National Members * To extend the number of prizes to 4 categories in the future;   1. Safety 2. Artistic Value 3. Historic Value 4. Favourite lighthouse by seafarers. | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  +  +  +  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones / Remaining key milestones for completing the task include:   * Approval by Secretariat for the Competition. * Announcing on the IALA website. * Collection of nominations for Heritage Lighthouses of the Year 2019 from National Members * Arrange the materials and database on the Heritage Lighthouses from National Members * Do a preliminary screening after receiving possible candidates from National Members * Suggest 2 or 3 candidate(s) to the Selection Committee for the World Heritage Lighthouse of the year for ‘World AtoN Day’ | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
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| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 2.6.6 Deliver Heritage Workshop | | | |
| Objectives of the task | To deliver a Heritage Seminar that will allow the sharing of information and experiences on the preservation and use of heritage lighthouses. | | | |
| Expected outcome | A Seminar that increased awareness and understanding of heritage lighthouses and creates interest in the activities of the Heritage Forum. | | | |
| Strategic Alignment | **Goal: G2**  **Strategy: S3** | | | |
| Scope (Describe key items that are in scope/out of scope) | * Understand the method s of preservation of lighthouses. * Understanding the variety of Lighthouses from all around the world. * Sharing different philosophy and concept of Utilization and Preservation of Lighthouses | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones / Remaining key milestones for completing the task include:   * Draft Seminar Proposal. * Approval of Heritage Seminar. * Organize the workshop committee * Announce the heritage workshop program and schedule * Collect and select the abstract papers for workshop * Proceed the workshop program | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
|  |  |  |  |

| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 2.7.1 Revise Recommendation R1004 to reference the UN Sustainable Development Goals | | | |
| Objectives of the task | Revise Recommendation R1004 to incorporate how IALA implements the UNSDG in its activities. | | | |
| Expected outcome | Revised Recommendation R1004 referring to each of the 17 UNSDG | | | |
| Strategic Alignment | **Goal: G2**  **Strategy: S3** | | | |
| Scope (Describe key items that are in scope/out of scope) | Inclusion of a schematic with all 17 UNSDGs, including a description and reference to IALA activities and how they contribute to those goals. | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones for completing the task include:   * Review of the UNSDG * Preparation of a schematic and description of IALA contribution. * Revision of the Recommendation * Review of the revision. * Finalize and approve the revised Recommendation. | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
|  |  |  |  |

| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 3.1.1 Resilient PNT (applicable to all techical domains) – (identification, potential impact and mitigations) | | | |
| Objectives of the task | To create a Recommendation and Guideline on Resilient PNT. The recommendation invites members to consider resilient PNT while the guideline offers assistance on what that means and the potential impact of different potential interference, jamming and spoofing events. | | | |
| Expected outcome | Recommendation and Guideline | | | |
| Strategic Alignment | **Goal: G1**  **Strategy: S1, S3** | | | |
| Scope (Describe key items that are in scope/out of scope) | In scope   * Cyber events that can affect the PNT solution performance   Out of scope   * General encryption details, receiver design and development activities. | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones / Remaining key milestones for completing the task include:   * Draft Recommendation (ENG08) * Draft Guideline (ENG10) | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
|  |  |  |  |

| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 3.2.1 Terrestrial radionavigation systems | | | |
| Objectives of the task | Provide overview Recommendation on the provision of terrestrial radionavigation systems, for example eLoran or R-Mode. | | | |
| Expected outcome | Recommendation | | | |
| Strategic Alignment | **Goal: G1**  **Strategy: S1, S3** | | | |
| Scope (Describe key items that are in scope/out of scope) | * Scope to consider any terrestrial radionavigation system providing independent PNT, such as eLoran or R‑Mode * Augmentation systems are out of scope. | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones / Remaining key milestones for completing the task include:   * Initial draft for ENG10 * Final Recommendation by ENG12 | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
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| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 3.2.2 R-Mode (MF) | | | |
| Objectives of the task | Develop Guidelines for service providers implementing R-Mode at existing DGNSS radio beacon sites using transmissions in maritime radio beacon band (283.5 to 325 kHz) | | | |
| Expected outcome | MF R-Mode service provision Guideline. | | | |
| Strategic Alignment | **Goal: G1**  **Strategy: S1, S3** | | | |
| Scope (Describe key items that are in scope/out of scope) | This document should capture all elements of R-Mode service provision, including required hardware modifications, signal in space characteristics, data formats and required system components for timing and synchronisation. | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  +  +  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones / Remaining key milestones for completing the task include:   * Performance requirements * System architecture * Modification of MF transmission service including R-Mode modulation * Timing and Synchronisation * Technical implementation * Operational aspects | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
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| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 3.2.3 R-Mode (AIS/VDES) | | | |
| Objectives of the task | Develop Guidelines for service providers implementing R-Mode at VHF transmissions | | | |
| Expected outcome | VHF (AIS) R-Mode service provision Guideline  VHF (VDES) R-Mode service provision Guideline. | | | |
| Strategic Alignment | **Goal: G1**  **Strategy: S1, S3** | | | |
| Scope (Describe key items that are in scope/out of scope) | This document should capture all elements of R-Mode service provision, including required hardware modifications, signal in space characteristics, data formats and required system components for timing and synchronisation. | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  +  +  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones / Remaining key milestones for completing the task include:   * Performance requirements * System architecture * Modification of AIS/VDES transmission service including modulation * Required AIS/VDES message content and slot alignment configuration * Timing and Synchronisation * Technical implementation * Operational aspects | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
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| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 3.2.4 Workshop on R-Mode in 2019 | | | |
| Objectives of the task | Bring experts of different IALA committees and other together and identify most promising concepts for the R-Mode implementation while discussing available proposals. | | | |
| Expected outcome | * Technical specification of R-Mode system and service * Technical Requirements for R-Mode implementation on MF, AIS and VDES Strategy for deployment * Review and update of the roadmap | | | |
| Strategic Alignment | **Goal: G2**  **Strategy: S1, S3** | | | |
| Scope (Describe key items that are in scope/out of scope) | * Consolidation of the user requirements on R-Mode system * Implementation aspects of R-Mode on VHF (VDES/AIS) * Implementation aspects of R-Mode on MF * Results from simulations and test field trails | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones / Remaining key milestones for completing the task include:   * Identify most important topics for the workshop * Define workshop target group of external experts and IALA members * Review of ongoing R-Mode activities * Ask and invite experts to prepare elaborated proposals for the discussions on the workshop * On the workshop: Discuss about most suitable approaches for the R-Mode implementation * On the workshop: Identify further key issues (unsolved issues) to solve in the next future * On the workshop: Develop a roadmap (technology and standardisation) for the implementation of R-Mode as alternative PNT System * The workshop is being considered as an opportunity to form agreements on the way forward and it is clear that work to develop ideas and proposals is needed to ensure the topics are suitably mature to enable decisions to be made * Prepare input to IALA committees | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
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| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 3.2.5 R-Mode testbed progress coordination | | | |
| Objectives of the task | Based on the development of different testbeds worldwide for the testing of R-Mode technologies (MF and VHF), a coordination shall take place in order to use synergies between the test areas and to make the results available to the IALA members in a comparable form. | | | |
| Expected outcome | Shared Information about R-Mode testbeds and documented results of trials available at the IALA-AISM Website for E-NAVIGATION TESTBEDS <http://www.iala-aism.org/technical/e-nav-testbeds/> or/and a suitable platform | | | |
| Strategic Alignment | **Goal: G1**  **Strategy: S3** | | | |
| Scope (Describe key items that are in scope/out of scope) | The results of R-Mode research and developments activities as well as availability of R-Mode testbeds shall be shared between the IALA members to speed up the development process. All available information should be collected on a platform that allows easy access to it.  All testbeds shall be described clearly follow the IALA Guideline 1107 “Planning and reporting of e-Navigation Testbeds”  The testbeds should be suitable for investigating open technical problems and finding answers to them. | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  +  +  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones / Remaining key milestones for completing the task include:   * Define a suitable platform for the coordination of R-Mode testbed activities. * Prepare a draft template for the description of R-Mode Testbeds following the IALA Guideline 1107 “Planning and reporting of e-Navigation Testbeds” which considers the testbed coordination approach. * Present the draft template as input document to ENG9 Meeting in March 2019 * Motivate preferably all actors working within the scope of R-Mode technologies to participate on the Workshop on R-Mode in 2019 (probably in June or July 2019) * Monitor and support the final creation of testbed descriptions for all available testbeds (the content itself it task of each testbed operator) * Monitor changings as well as updates with a specific focus on the provision of testbed results * Keep content of coordination platform up-to-date | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
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| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 3.2.6 Develop and maintain relevant Product Specifications eg. S-245 eLoran ASF data, S-246 eLoran transmitting station alamanc, S-247 Differential Loran reference station etc. | | | |
| Objectives of the task | To develop a product specification on eLoran data | | | |
| Expected outcome | S-245, S-246, S-247 product specification  Product specification document on eLoran data:  - S-245 eLoran ASF data  - S-246 eLoran transmitting station almanac  - S-247 Differential loran reference station almanac | | | |
| Strategic Alignment | **Goal: G2**  **Strategy: S3** | | | |
| Scope (Describe key items that are in scope/out of scope) | Develop a product specification, as base for seamless implementation of technology for: manufacturers, service providers and maritime end-user. | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  +  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones / Remaining key milestones for completing the task include:   * User requirements, but should include data to be exchanged. * Documentation of product specifications * Implementation of the eLoran related product specifications * Planning the test scenario and verification * What systems are available now and in the future * Update the product specification documents * Liaison with RTCM SC127 (eLoran) and others * Liaison with eLoran service providers and manufacturers | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
|  |  |  |  |

| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 3.2.7 Guidance on timing and synchronisation | | | |
| Objectives of the task | Describe solutions that can be applied by maritime service providers to reach a certain level of timing accuracy for their infrastructure and services. | | | |
| Expected outcome | Guideline on timing and synchronisation | | | |
| Strategic Alignment | **Goal: G1**  **Strategy: S1** | | | |
| Scope (Describe key items that are in scope/out of scope) | Accurate timing is important for many services, used both as absolute time references and for synchronisation. For example, accurate station timing is a crucial point for radionavigation services, where the timing error of a station has direct impact on ranging error and position solution. Another example is that accurate clock synchronisation is needed for some types of encryption and message authentication services.  Therefore, the Guideline should analyse and present technologies that enable accurate station timing to help enable service providers to establish accurate station timing with respect to their needed accuracy level. Concepts for time synchronisation that are not dependent on GNSS should be included. | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones / Remaining key milestones for completing the task include:   * Review of existing IALA documents which deal with the issue of station timing and synchronisation * Generate a list of available technologies and prove them for applicability * Include aspect of cost benefit analysis of different concepts of time synchronisation and hold over technologies * Detailed description of most promising approaches for, in particular, radionavigation station timing and synchronisation | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
|  |  |  |  |

| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 3.3.1 eRacon (standard approach) ; Review recommendations ENAV146 & R-101 & Guideline 1010 | | | |
| Objectives of the task | Maintain and update existing racon recommendations and guidelines as needed. Write new guidelines as needed. | | | |
| Expected outcome | Updated recommendations E-NAV-146, R-101. Updated guideline 1010. New guidelines on racon usage and on enhanced racon (eRacon). | | | |
| Strategic Alignment | **Goal: G1**  **Strategy: S1, S3** | | | |
| Scope (Describe key items that are in scope/out of scope) | Examine the recommendations E-NAV-146 and R-101 and Guideline 1010. Scope of work is to bring documents up to date using current recommendation practice, creating new guidelines as needed to close gaps. | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  +  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones / Remaining key milestones for completing the task include:   * E-NAV-146 is significantly out of date and many sections are no longer relevant. Determine if E-NAV-146 should be withdrawn and remaining material distributed to R-101 and a new guideline on racon usage. * R-101 is not in the new recommendation style. Rewrite as needed to bring into correct format. Move annex from the recommendation into a new guideline on racon usage. * Create new guideline on racon usage. Include material from E-NAV-146 and R101. * Update Guideline 1010 to include examples of range when using low-power solid-state radars. Consider combining material from 1010 into the new guideline on racon usage and withdrawing 1010. * Create new guideline on use of enhanced racons (eRacon). | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
|  |  |  |  |

| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 3.4.1 Consideration of how and when to use SBAS in maritime. | | | |
| Objectives of the task | Provide guidance to maritime administrations in their considerations concerning recognition of SBAS to be used as a maritime aid to navigation | | | |
| Expected outcome | Short IALA guideline document | | | |
| Strategic Alignment | **Goal: G1**  **Strategy: S1, S3** | | | |
| Scope (Describe key items that are in scope/out of scope) | This document should capture all elements of SBAS system and service provision, including reference requirements, description of the service and the operational chain and equipment | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | In scope:   * Technical description of the Service performance and operational characteristics   + Performance criteria – availability, continuity, integrity, accuracy, geographical service area for maritime use   + Compliance to IMO requirements and IALA guidelines and recommendations * Service assurance * Options for implementation * Service Provision Scheme (operational chain): actors involved, roles and responsibilities   + Operation and maintenance   + Performance verification activities   + Service disruption risks and mitigations: Provisioning of information to users and maritime administrations regarding service disruptions   + Publication of service information: promised and achieved performance and instructions for use * User segment approach: equipment compatibility to the service, including requirements for standardization of user equipment and needed equipment upgrades   Not in scope:   * Costs * Comparison between augmentation systems * Justification of the need for augmentation systems   The Key milestones (needed actions on the Group/Committee) for completing the task include:   * Identify Maritime Authorities needs and legal requirements wrt the recognition of SBAS as an Aids to Navitation * Identify and communicate with existing and emerging SBAS service providers intention to acquire a service for marine use, existing and planned service performances and service management regarding maritime use * Identify and communicate with producers of maritime navigation equipment, or CIRM, to acquire existing and planned utilization of and compatibility to SBAS | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
|  |  |  |  |

| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 3.4.2 Review existing DGNSS infrastructure and provide guidance for current system | | | |
| Objectives of the task | Review and maintain DGNSS relevant documents | | | |
| Expected outcome | Updated DGNSS relevant documents | | | |
| Strategic Alignment | **Goal: G1**  **Strategy: S1, S3** | | | |
| Scope (Describe key items that are in scope/out of scope) | New technology for PNT is emerging but it is envisaged that the DGNSS infrastructure will remain operational in many parts of the world for years to come. In order to continue to provide guidance to service providers of DGNSS, maintenance of the DGNSS relevant documents are needed.  To support the maintenance there is a need for review of the current Recommendations and Guidelines regarding DGNSS according to the following lists:  - Recommendation 115, 121, 129, 135 and 150  - Guideline 1016, 1053, 1060, 1112 and 1126  If needed, amend the individual documents and/or make suggestions for other actions such as removal of the document or combining of documents.  The reviews should also take into account the possible new RTCM version 2.4. | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones / Remaining key milestones for completing the task include:   * Review the DGNSS relevant documents and update them to reflect the current situation * Check all references from the above documents and check status * List new services that could be transmitted with the current DGNSS infrastructure and frequency | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
|  |  |  |  |

| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 3.4.3 New Recommendation on augmentation for maritime use | | | |
| Objectives of the task | To provide recommendation to PNT service providers that intend to deliver a maritime service to formally declare and capture the service they offer | | | |
| Expected outcome | IALA new recommendation | | | |
| Strategic Alignment | **Goal: G1**  **Strategy: S1** | | | |
| Scope (Describe key items that are in scope/out of scope) | On the scope:  The recommendation address any providers, National members and other appropriate Authorities/Organisations, that do provide or plan to provide a PNT maritime service  The recommendation includes the way that such a service provider has to proceed to declare a maritime PNT service  The recommendation provides as an annex a template of Pro-forma to fill to declare the PNT service.  Out of scope:  The recommendation not address the National members and other appropriates Authorities/Organisations providing shore IALA beacons stations since they are already requested to do so in R121 | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones / Remaining key milestones for completing the task include:   * This will be a simple recommendation + the pro-forma as an annex. | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
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| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 3.4.4 Provide guidance, strategy and advice on potential new uses of marine beacon DGNSS infrastructure | | | |
| Objectives of the task | Develop recommendations to service providers to promote consideration of opportunities to repurpose the equipment, infrastructure, and frequency associated at discontinued DGNSS radio beacon sites using transmissions in maritime radio beacon band (283.5 to 325 kHz) | | | |
| Expected outcome | IALA Recommendation highlighting existing and emerging opportunities for repurposed or modified use of discontinued DGNSS systems and the associated infrastructure and frequency. This consolidated listing of possibilities would inform service providers' consideration of how to preserve potentially perishable resources to best serve marine navigation, following a decision to discontinue DGNSS beacon service | | | |
| Strategic Alignment | **Goal: G1**  **Strategy: S3, S4** | | | |
| Scope (Describe key items that are in scope/out of scope) | This document should provide a comprehensive review of extant and emerging marine navigation systems that might use the spectrum and/or the infrastructure associated with discontinued DGNSS beacon systems. This would include a cursory assessment of the presumed benefits and challenges associated with the adoption of each proposed technology. This document would not seek to provide a detailed itemization of recapitalization costs, but would highlight the opportunity costs of failing to preserve resources for maritime application. | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones / Remaining key milestones for completing the task include:   * Review theoretical maritime applications of DGNSS infrastructure and spectrum, referring to draft guideline on resilient PNT * Review barriers and challenges associated with each proposal * Discuss how each proposal improves marine navigation service delivery * Identify informational resources on proposed technologies * Provide a recommendation to provide additional rigor to the IALA position provided in the input paper ENG8 11.12 | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
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| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 3.4.5 High accuracy systems | | | |
| Objectives of the task | Develop Guideline of High accuracy systems | | | |
| Expected outcome | Guideline on High accuracy systems | | | |
| Strategic Alignment | **Goal: G1**  **Strategy: S1, S3** | | | |
| Scope (Describe key items that are in scope/out of scope) |  | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  +  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones / Remaining key milestones for completing the task include:   * Performance requirements * System architecture * Modification of AIS transmission service including modulation * Required AIS message content and slot alignment configuration * Timing and Synchronisation * Technical implementation * Operational aspects | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
|  |  |  |  |

| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 3.5.1 Review and update current documentation under the preview of PNT WG | | | |
| Objectives of the task | Maintain PNT Working Group relevant Recommendations, Guidelines and other IALA documents (e.g. WWRNP, R-135). | | | |
| Expected outcome | The outputs of this task are input papers to committees responsible for the documents referenced in the input paper. The purpose of the input papers is to create a work items to update IALA documents as needed. | | | |
| Strategic Alignment | **Goal**: **G1**  **Strategy: S1, S3** | | | |
| Scope (Describe key items that are in scope/out of scope) | Review all existing documentation and consider whether it remains extant, requires modification or retirement. Generate list of actions in first instance and then update work task accordingly.  Identify Recommendations which, if required, need to be split into Recommendations and Guidelines. | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  +  +  +  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones / Remaining key milestones for completing the task include:   * All IALA Recommendations, Guidelines and other publications reviewed in order to identify those with PNT relevance. * PNT relevant documents identified at the milestone above reviewed for timeliness and accuracy. * Input papers to future committee sessions written and submitted for documents identified at the milestone above that need revision. * Task updated as needed. | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
|  |  |  |  |

| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 3.5.2 Monitor developments in GNSS, DGNSS, radar, resilient PNT, e-Pelorus, terrestrial systems, R-Mode, inertial and any other relevant areas etc. | | | |
| Objectives of the task | To keep the WG informed of the most recent developments regarding GNSS, DGNSS, radar, resilient PNT, ePolorus, terrestrial systems, inertial and any other relevant areas regarding radionavigation and PNT. | | | |
| Expected outcome | Sharing of general information on developments regarding PNT related systems. | | | |
| Strategic Alignment | **Goal: G2**  **Strategy**: **S1, S3** | | | |
| Scope (Describe key items that are in scope/out of scope) | Update of information regarding existing GNSS systems.  Inform on planned GNSS systems.  Development regarding DGNSS (new msg’s etc.)  Development regarding eLoran, R-mode etc.  NT radar and eRacon development  Development of Inertial navigation systems  Any updates regarding ePolorus | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  +  +  +  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones for completing the task include:   * Follow developments and present short brief on the latest developments regarding GNSS, DGNSS, radionavigation, PNT terrestrial system etc. | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
|  |  |  |  |

| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 3.6.1 Update to ITU M.823, potential replacement for A.915, Liaison with IMO, ITU, RTCM, etc on related topics and project areas | | | |
| Objectives of the task | Liaison activities with the IMO, covering all elements relating to PNT. This can include liaison notes through to the development of IALA input documents on items such as the revision of A.915. | | | |
| Expected outcome | Liaison notes and draft input documents as required. | | | |
| Strategic Alignment | **Goal: G2**  **Strategy: S1, S3** | | | |
| Scope (Describe key items that are in scope/out of scope) | The scope will vary depending on the topic at hand. | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  +  +  +  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones for completing the task include:   * Liaison note on the need to retire A.915 and the outline of a proposed new maritime operational requirements document. – Planned output of ENAV18 * Extended Maritime operational requirements document, with draft requirement figures for further consideration – planned input for ENAV19, or ENAV18 if possible. | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
|  |  |  |  |

| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 3.7.1 Input to MSP, Integrity considerations for resilient PNT, cybersecurity impact for PNT data, DATUM considerations | | | |
| Objectives of the task | Consider new and additional work items as they develop, potentially including Integrity considerations for resilient PNT, cyber-security issues and, DATUM considerations | | | |
| Expected outcome | Guidelines and liaison notes as required | | | |
| Strategic Alignment | **Goal: G1**  **Strategy:** S1, **S3** | | | |
| Scope (Describe key items that are in scope/out of scope) | Consider new and additional work items as they develop. Out of scope are topics already covered by other tasks highlighted in the task register. | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  +  +  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones for completing the task include:   * To be updated as tasks are noted. | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
|  |  |  |  |

| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 4.1.1 Development and review of WWA courses | | | |
| Objectives of the task | To support WWA in revising the model courses | | | |
| Expected outcome | Model courses revised | | | |
| Strategic Alignment | **Goal: G2**  **Strategy:** **S4** | | | |
| Scope (Describe key items that are in scope/out of scope) | On going task | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  +  +  +  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones for completing the task include: | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
|  |  |  |  |

| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 4.2.1 Navguide updates and review | | | |
| Objectives of the task | Update and review the ‘ENG’ chapters of the Navguide | | | |
| Expected outcome | Reviewed and updated Manual | | | |
| Strategic Alignment | **Goal: G1**  **Strategy: S1** | | | |
| Scope (Describe key items that are in scope/out of scope) |  | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  +  +  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones for completing the task include: | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
|  |  |  |  |

| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 5.1.1 Review telemetry Guideline 1008 | | | |
| Objectives of the task | Review and revise existing G1008 on Remote Monitoring and Control of Aids to Navigation. | | | |
| Expected outcome | A revised version of G1008 | | | |
| Strategic Alignment | **Goal: G1**  **Strategy: S1** | | | |
| Scope (Describe key items that are in scope/out of scope) | * Review existing G1008 for changes or updates required to identify any obsolete technologies or the need to include new technologies or methods of remote monitoring. * Review terminologies used and update as needed. | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7  +  +  +  +  + | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones for completing the task include:   * Review and revise G1008. * Identify any obsolete technology mentioned in G1008 and remove. * Seek input from committee members on new technologies or methods of remote monitoring. Include additional content as necessary. * Finalize document. * Send for approval. | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
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| **ENG Committee – 2018-22 Work Programme** | | | | |
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| **TASK** | 5.1.2 Review of engineering support for e-navigation services, (including hot/cold climates & radio propagation). | | | |
| Objectives of the task | To be confirmed | | | |
| Expected outcome |  | | | |
| Strategic Alignment | **Goal:**  **Strategy:** | | | |
| Scope (Describe key items that are in scope/out of scope) |  | | | |
| Expected Sessions for Completion: | Session number:  1 2 3 4 5 6 7 | | | |
| Brief and concise description of the work to be undertaken and programme milestones where appropriate. | Key milestones for completing the task include: | | | |
| **Task Revision** | **Ver.** | **Date** | **Part / Section Revised** | **Requirement for Revision** |
| 1 | 2018.10.18 | ENG8 |  |
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# Annex 1: IALA’s Strategic Vision 2018-2026

**Motto**

Successful Voyages, Sustainable planet

**Goals**

G1- Marine Aids to Navigation are developed and harmonised through international cooperaiton and the provision of standards

G2- All coastal states have contributed to a sustainable and efficient global network of Marine Aids to navigation through capacity building and the sharing of expertise

**Strategies**

S1-Develop standards suitable for direct citation by states, in areas deemed important by the general assembly, and the related Recommnedations and Guidelines

S2- Position IALA as the source of standards, knowledge, and expertise that will enable States to provide Marine Aids to Navigaiton, in accordance with relevant international obligations and recommendations.

S3- Co ordinate the further development of Marine Aids to Navigaiton, taking into account evolving operational and functional requirements, new techniques and sustainability.

S4- Continue to develop capacity building activities to improve the global provision of Marine Aids to Navigaiton

S5- Harmonise the informaiton structure and communicaitons for future navigation by creating standards, and by cooperation with other international organisaitons, to achieve worldwide interoperability of shore and ship systems.

S6- Improve and harmonise the delivery of VTS globally and in a manner consistent with international conventions, national legislation and public expectations, to ensure the safety and effiency of vessel traffic and to protect the environment.

S7- Work towards the transformation of IALA into an IGO, to enable the organisaiton to achieve its aim and objectives.

S8- Ensure that the resources and capabilities of the secretariat are sufficient to enable IALA and its committees and organs to reach its goals.