

**Report of the 15th Meeting of the ENAV Committee**

**13 – 17 October, 2014**

**Executive Summary**

* 129 people from 17 countries and 5 sister organisations, attended the 15th session of the ENAV Committee, of which 36 members were new and 2 were observers;
* The committee has adjusted its working arrangement and now has five working groups with the following titles: Harmonization, Implementation, Telecommunication, ENAV Services, and Positioning, Navigation and Timing (PNT). Output paper ENAV15-14.1.6 describes the Terms of Reference for these Working Groups.
* The Committee considered 113 input papers;
* The Committee produced 13 output papers and 51 working papers;
* Marek Dziewicki was approved as an e-Navigation expert in the Academy;
* Paper ENAV15-3.3.1, Working Document Toward a Preliminary draft New Recommendation ITU-R M[VDES r1, was approved by Council by correspondence during the week of ENAV15 and was submitted to ITU on 17th October ahead of the deadline for submissions. The Committee thanks the Council for its assistance in this matter.
* The Committee prepared a work plan for the work period 2014-2018. The following table shows a summary progress while progress on each work task to date is shown in ANNEX F.

| **Task** | **Progress Indicator** | | | **Status Overview** |
| --- | --- | --- | --- | --- |
| **Green** | **Yellow** | **Red** |
| **1 TD#1 – Data modelling and message systems** | ☒ | ☐ | ☐ | All tasks progressing per plan |
| **2 TD#2 - e-Navigation communications** | ☒ | ☐ | ☐ | All tasks progressing per plan |
| **3 TD#3 - Shore technical infrastructure** | ☒ | ☐ | ☐ | All tasks progressing per plan |
| **4 TD#4 - e-Navigation test beds** | ☒ | ☐ | ☐ | All tasks progressing per plan |
| **5 TD#5 - Maritime Service Portfolios** | ☒ | ☐ | ☐ | All tasks progressing per plan |

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| ENAV Committee  15th Session | 17 October, 2014 |

Report of the 15th Session of the IALA ENAV Committee

# General

The 15th meeting of the **ENAV Committee** was held from 13 – 17 October, 2014 at IALA, with Omar Frits Eriksson as Chairman and Hideki Noguchi as Vice-Chairman. The Secretary for the meeting was Seamus Doyle.

# opening

## Administration & Safety Briefing

Virginia Butler provided a Safety and Administrative brief. Attention was drawn to the Committee website and ftp ialashare working arrangements for documents.

## Approval of the agenda

The agenda (paper ENAV15-1.2) was adopted.

## Introductions and apologies

Omar Frits Eriksson introduced himself as the new Chairman of the ENAV Committee and noted that it was great honour to be entrusted with the task. He introduced the Deputy Secretary-General, who welcomed everyone and brought the Committee up to date with IALA’s recent activities in the areas of 12 year strategy development, the purpose of the IALA, IALA document policy, Council and Committees management and the consideration of IALA moving from French charitable status to an international organisation status. A list of attendees and apologies is provided at ANNEX B.



Omar Frits Eriksson added his welcome to both newcomers and those returning to IALA.

## Programme for the week

Paper ENAV15-1.4 refers. The programme for the week was approved.

# Review of Action Items from e-NAV14

Paper ENAV15-2.1 refers. It was noted that the action items from e-NAV14 for the IALA Secretariat were complete. Actions for Committee Members were referred to the Working Groups and were noted as mostly complete.

Action

Peggy Browning is requested to provide an article on the IALA VDES plan for the IALA Bulletin. Paper e-NAV14-17.1.3.1 may assist.

# Review of input papers

## Input papers

It was noted that all input papers were available on the IALA website. It was noted that the input papers for each Working Group (WG) were identifiable from the document number.

## Identify input papers suitable for uploading to the IALA Wiki

The Chairman introduced the IALA Wiki and presented a short demonstration of its use. It was noted that an ENAV test work task had been created on the Wiki. ENAV Committee members were encouraged to use the Wiki.

Committee Members were requested to notify the Vice Chairman of any papers considered to be suitable for uploading to the IALA Wiki.

## Approval of papers from intersessional meetings

Input paper ENAV15-3.3.1, Working Document Toward a Preliminary draft New Recommendation ITU-R M[VDES], was approved for submission to Council for approval by correspondence, and subsequent submission to ITU-WP5B for the 27th October 2014 meeting.

Action

The Secretariat is requested to forward Output paper ENAV15-3.3.1 to Council for approval by correspondence by 17th October 2014.

The Secretariat is requested to forward Output paper ENAV15-3.3.1 to ITU-WP5B on 17th October 2014.

# Reports from other bodies

## IALA Council

The Committee noted the following Council reports:

* 56th Session, Goa, India, 9-13 December 2013, Paper ENAV15-4.1.1 refers;
* 57th Session, La Coruna, Spain, 25 May 2014, Paper ENAV15-4.1.2 refers;
* 58th Session, La Coruna, Spain, 31 May 2014, Paper ENAV15-4.1.3 refers.

## Report from IALA General Assembly / Conference, May 2014

The Committee noted the report of the 18th IALA Conference, paper ENAV15-4.2.1, and the report of the Pre-18th IALA Conference Seminar Report, paper ENAV15-4.2.2.

The Committee reviewed the Conclusions and Actions from the 18th IALA Conference, paper ENAV15-4.2.3 refers, and noted the conclusions and actions of relevance to the ENAV Committee. Working Group (WG) Chairs were requested to add relevant tasks to their work plans.

## Report of PAP26, October 2013

The Committee noted the report of PAP26, paper ENAV15-4.3.1 refers.

## Report of PAP27, March 2014

The Committee noted the report of PAP27, paper ENAV15-4.4.1 refers. PAP27 was an extraordinary meeting to consider IALA documentation policy.

## Report of PAP28, October 2014

The Committee noted the report of PAP28, paper ENAV15-4.5.1 refers. The actions from PAP28 were reviewed and actions for the ENAV Committee were noted for attention of the Working Group Chairs.

## Report of MSC93, May 2014

The Committee noted the report of the IMO MSC 93-22 meeting, paper ENAV15-4.6.1 refers. Content relating to ENAV Committee work were highlighted by Michael Card.

## Reports from NAV59, September 2013 & NCSR1, July 2014

The Committee noted the reports from IMO NAV59, September 2013 and IMO NCSR1, July 2014, papers ENAV15-4.7.1 and ENAV15-4.7.2 refer. Mahesh Alimchandani highlighted issues of relevance to IALA with particular reference to the need for IMO to continue with coordination of the SIP implementation.

## Report from VTS38, October 2014

The Committee noted the report of VTS38, paper ENAV15-4.8.1 refers. Pieter Paap highlighted issues of relevance to the ENAV Committee. A plea was made for a volunteer to fill the essential role of rapporteur between the ENAV and VTS committees.

## Reports from e-Navigation Underway 2014 & e-Navigation Underway N America 2014

The Committee noted the following e-Navigation Underway reports:

* e-Navigation Underway 2014 report, Paper ENAV15-4.9.1 refers. The next event is in January 2015.
* e-Nav Underway USA Conference Communique, Paper ENAV15-4.9 refers.

## Report from IALA ENAV CSSA Workshop, August 2014

The report of the IALA ENAV Common Shore-based System Architecture (CSSA) Workshop in Hamburg, Germany, in August 2014 was noted, Paper ENAV15-4.10 refers. Jan-Hendrik Oltmann summarised the outcomes of the workshop, noting that a suite of Workshop output papers were developed and submitted to the ENAV15 for completion. The Committee expressed its appreciation to Jan-Hendrik Oltmann and the German Federal Waterways and Shipping Administration for hosting an excellent event.

# reports from rapporteurs

## Monitor and report progress on related systems

The Chairman outlined the need for Rapporteurs to monitor and report on an on-going basis to the Committee on developments in specific topics. He requested Committee Members to provide ideas for rapporteur topics and for volunteer Rapporteurs.

Jean-Charles Cornillou provided an update on the GMDSS review. He volunteered to act as Rapporteur for GMDSS developments.

Action

Committee Member*s* are requested to provide ideas for ENAV rapporteur topics and to volunteer to act as Rapporteurs.

## IALA Bulletin

Hideki Noguchi noted that he will be providing a report for the IALA Bulletin on ENAV15. He observed that some input papers may be suitable as a basis for Bulletin articles and requested Committee Members to submit articles for the Bulletin.

Actions

Jan-Hendrik Oltmann and Michael Hoppe are requested to provide an article for the IALA Bulletin based on the ENAV15 input paper.

Mahesh Alimchandani is requested to draft an article for the Bulletin requesting the membership to provide information on existing and planned test beds.

## IALA Dictionary

Omar Frits Eriksson noted that the IALA Dictionary is available on the IALA web site and encouraged all Committee Members to use and update it.

Concern was expressed regarding the lack of an approval process for updates to the Dictionary. It was noted that a proposal from the PAP for a nominated editor for the Dictionary should address this vulnerability, with approval of updates to the Dictionary as a possible role of the PAP.

# Presentations

Eight presentations were made during the meeting. The presentations form part of the input to the meeting.

## IALA Strategy

Papers ENAV15-6.1.1 and 6.1.2 refer. Michael Card described the IALA strategy 2014-2018 and the revised IALA Committee structure.

## World-Wide Academy (WWA) update

The presentation was made by Stephen Bennett, Programme Manager for the IALA WWA and is shown as paper ENAV15-6.2.1. He highlighted approval of the post of new full time member of staff based at IALA HQ to manage increased Academy tasks. Committee Members were invited to support the model course on introduction to e-Navigation at IALA HQ on 4-5 November 2014. Marek Dziewicki was approved as an e-Navigation expert in the Academy.

## ENAV2014 Conference, Seattle, November 2014

Paper ENAV15-6.3 refers. Bill Cairns invited all IALA ENAV Committee members to attend the NAV2014 Conference in Seattle in November, 2014.

## Outcome of the Korean testbed for the MONALISA/ACCSEAS route exchange

Paper ENAV15-6.4.1 refers. Thomas Porathe reported on a cross cultural study on ship traffic management route exchange and acceptance in Korea and Sweden.

Jin Hyoung Park reported on the KRISO Second Collaborated Test for e-Navigation Solutions in Korean Waters. Paper ENAV15-6.4.2 refers.

A comment was made to the effect that high levels of training in e-Navigation should not be necessary as existing navigation training should be sufficient.

## Update on IALA DGNSS data gathering and filing

Paper ENAV15-6.5 refers. Cho Yong Hun presented an update on IALA DGNSS data gathering and filing.

## R-Mode for resilient PNT

Paper ENAV15-6.6 refers. Michael Hoppe made a presentation about R-Mode for resilient PNT.

## Introduction to Navigation Aid Integrated Application System

Paper ENAV15-6.7 refers. Zhixiu Du made a presentation on the Navigation Aids Integrated Application System in China, describing the system architecture and key functions.

## NAVDAT Test in China

Paper ENAV17-6.8 refers. Qiang Sun made a presentation about a new NAVDAT shore-based MF radio system, operating in the 500 kHz band for digital broadcasting of maritime safety and security related information and other service information. NAVDAT can be used in improved shore-based services, e-Navigation Risk Control Options.

## Portview Google sea view system

Kenneth Himschoot made a presentation of the Portview Google Street view from the water web application. Views from the water were generated using a camera on a jet ski and trial views are available for 11 ports. Requests for email notifications of progress can be submitted on <http://portview.gallery>. The application was launched in Monaco recently and Committee members were invited to try the system. The view is from jet ski height only but may be extended in the future. The demonstration indicated an excellent tool for pre-viewing ports and port entry in a Google Street View mode.

In discussion, concern was expressed regarding the risks of mistaking the charts as navigation charts. However strict controls of accuracy and integrity are applied as for Google maps. Chart datum control may also be an issue. AtoN data does not match the visual image. The system does not cater for tidal variations which can be as much as 4m. Partners are invited to provide accurate chart and AtoN information which can be added as a system layer and overlaid on the imagery.

# Establish Working Groups

Five working groups were established, as outlined below:

|  |  |  |
| --- | --- | --- |
| Working Group | Working Group Chair | Working Group Vice Chair |
| WG 1 Harmonization | Edward Hosken | Peter Hooijmans |
| WG 2 Implementation | Mahesh Alimchandani | Bill Cairns |
| WG 3 Telecommunication | Peggy Browning | Stefan Bober |
| WG 4 ENAV Services | Jon Leon Ervik | Thomas Porathe |
| WG5 PNT | Alan Grant | Michael Hoppe |

Terms of reference for the Working Groups were reviewed and agreed, Papers ENAV15-7.1, ENAV15-7.2, ENAV15-7.3, ENAV15-7.4, ENAV15-7.5 refer. Terms of Reference for the Working Groups were agreed, Paper ENAV15-14.1.6 refers.

Action

The Secretariat is requested to forward Paper ENAV15-14.1.6, Working Groups Terms of Reference, to Council for approval.

# Working Group 1 – Harmonisation (WG1)

## Persistent Unique Identifier (PUI) for AtoN

Working Group 1 was asked to respond to input paper ENAV15-8.2 submitted on behalf of the IHO Standardisation of Nautical Publications Working Group (SNPWG). The IHO SNPWG has proposed that each AtoN be assigned an internationally recognizable ‘Persistent Unique Identifier’ (PUI). In their proposal, SNPWG noted that “An increasing number of offices produce their List of Lights information from a database. The re-order of both the national and/or the international numbers would cause significant problems for the producer.”

***Assessment***

The introduction of a Persistent Unique Identifier (PUI) for AtoN into S-100 will support IALA in its efforts in achieving AtoN data harmonization, improve interoperability of these data in the envisioned e-Navigation environment, and improve data quality through automation of List of Lights production. The use of a common number for an AtoN could result in the initiation of a data stream for AtoN information from source to user and supports the IMO e-Navigation concept.

***Additional Considerations***

Furthering this concept; the addition of PUI to waterway headers traditionally used in nautical publications will harmonize the exchange of larger data sets containing relevant marine information to a particular waterway. (e.g. all AtoN contained within the waterway, other unique navigation features within that waterway, and Marine Safety Information geo-referenced to the waterway).

Action Item

The Secretariat is requested to forward output paper ENAV15.14.1.12 to the ARM Committee for consideration.

Following review by the ARM Committee the Secretary General is requested to send a letter, based on ENAV15-14.1.12, to IHO endorsing the proposal that each AtoN be given a Persistent Unique Identifier. Furthermore, it is requested that both IHO-SNPWG and IHO-HSSC be invited to consider the expansion of the PUI concept to include waterway headers. As an annex, a draft letter has been prepared.

## S-200 Status Report

The Committee noted the status report. Upon review, it was evident that appropriate field managers have not been appointed. A liaison note and annex were created to inform IALA Committees asking for field managers to be identified, if not already done.

Action Item

The Secretariat is requested to forward the liaison note, ENAV15-14.1.7 to IALA Committees and the PAP.

## ****Revise Guideline 1087**** (Task 1.3.1)

IALA Guideline 1087, “Procedures for the management of the IALA domains under the IHO GI Registry”. will be revised to provide additional clarity on the need for harmonization between Product Specifications and or services defined across IALA WGs, and harmonisation between WGs and Committees in the development of CMDS product specifications. It will also include ‘procedural’ elements describing how ENAV WG1 will assist other ENAV WGs, and the definition of review/approval points through to registry of new production specifications on the IALA domain of the GI registry. This will include guidance on setting up Task Groups for developing product specifications.

## S-100 Service Orientation (Task 1.3.2)

The IHO Universal Hydrographic Data Model (S-100) supports Web Based Services, but the first edition does not adequately describe how such services are implemented. The current focus of S-100 is on the definition of product specifications which standardise the transfer of data files. IHO has in principle agreed to extend S-100 to include the provision of services, including data streaming, on the condition that IALA provides the new text required.

Task 1.3.2 will develop the required text, for discussion with the appropriate IHO technical working group (currently TSMAD) for review, such that the proposed amendments can be submitted to IHO for potential revision of the S-100 standard.

Action

The Chair of ENAV WG1 is requested to provide a draft information paper to clarify the terminology relating to Common Maritime Data Structure (CMDS) and S-100 for ENAV16.

## ****e-Navigation Risk Assessment**** (Task 4.3.3)

The implementation of e-Navigation presents both opportunities and risks. Although certain risks may be addressed by existing plans, there is no overarching or single repository for recording e-Navigation risks and their management plans.

The Committee will review and assess potential risks to IALA arising from e-Navigation developments and develop an e-Navigation Risk Management Plan in consultation with the LAP under Task 4.3.3. This will be a living document with formal annual reviews.

Action

The Secretariat is requested to add an agenda item in the WG1 report section for ENAV16 regarding clarifying the terminology used in IHO S-100 and the Common Marine Data Structure (CMDS).

## ****e-Navigation Roadmap**** (Task 4.3.4)

A liaison note was produced in March 2013 (PAP25/8) entitled “A Roadmap and Key Dates for e-Navigation”. This was intended to guide the development of the IALA e-Navigation strategy. This document needs to be revised and further developed to describe in more detail the milestones of IALA work in relation to the IMO Strategy Implementation Plan (SIP). The development of the Roadmap will also verify the consistency and completeness of IALA work on e-Navigation and identify appropriate collaboration between IALA and external organisations. The task was transferred to WG2.

## Develop Recommendation on Common Shore based System Architecture (Task 5.1.18)

A considerable amount of work has already taken place on the development of a Common Shore based System Architecture (CSSA). A draft of Recommendation E-140 and the CSSA System Layout are currently out with other committees for comment. These will be finalised at ENAV16. Existing documents were reviewed and a work plan agreed defining further work through to 2016 and beyond. The CSSA Service Model will be further developed in accordance with the work plan. A correspondence group will be established to work on the CSSA Service Model. A working paper on a future guideline on M2M interfacing within the CSS was drafted and will be further developed.

Action Item

Jan Hendrik Oltmann is requested to co-ordinate intersessional work on the Draft Recommendation of the CSSA Generic Service Model by correspondence group.

The Chairman is requested to provide guidance to the Committee and the Correspondence Group on distributing the content of the draft Recommendation E-140 between Recommendations and Guidelines.

## Advise IALA on e-Navigation infrastructure and its governance (Task 5.1.19)

Conclusion 3 of the IALA 2014 Conference (ENAV15-4.2.3) states that *“There is an emerging consensus to adopt the Maritime Cloud concept as a logical infrastructure for e-Navigation, with communications standardisation and resilient PNT”*. At present there is a lack of understanding of the opportunities, consequences and governance issues of an internationally agreed e-Navigation infrastructure such as the maritime cloud.

Task 5.1.19 will initially deliver an information paper on the Maritime Cloud concept, and further advice to IALA on appropriate ways forward in contributing to establishing an internationally agreed e-Navigation infrastructure. The aim is to influence the standardization of infrastructure and to ensure the required governance is developed and implemented for secure interoperable information exchanges between all stakeholders in the maritime sector.

Action

Ole Borup, Mikael Lind and Kwangil Lee were requested to submit an information paper to ENAV16.

# Working Group 2 – Implementation (WG2)

Working Group 2 was tasked to respond to input papers e-NAV 15-9.1 (ACCSEAS Conference 2014 report), e-NAV 15-9.2 (Sea Traffic Management Route Exchange study by Korea and Sweden) and e-NAV15-10.5 (Planned and ongoing testbeds for VDES development).

Recognizing that the Committee structure had changed somewhat with a new work term and associated programme, the Working Group held a general discussion on the previous efforts of the Testbed WG and how this WG might deal with the expected transition of testbeds to implementation of e-Navigation systems in the coming years. Toward those ends, the Committee developed terms of reference and a work plan for the Implementation WG. The WG also developed a Task Register detailing the WG tasks.

Action

The Secretariat is requested to add an item in the ENAV16 Programme for the week to facilitate plenary discussion of test beds.

## Maintain a global repository for test-bed results (Task 4.1.2)

The Committee reviewed the IALA website [www.e-Navigation.net](http://www.e-navigation.net). It considered input papers e-NAV 15-9.1 (ACCSEAS Conference 2014 report), e-NAV 15-9.2 (STM Route Exchange study by Korea and Sweden) and e-NAV15-10.5 (Planned and ongoing testbeds for VDES development). In addition, the Committee sought to identify active and completed e-Navigation testbeds in order to be able to catalogue the elements of e-Navigation being investigated and tested. The committee developed a proposed modified webpage for the website that would bring users directly to the catalogue of testbeds with overviews of their elements. Additionally the committee identified a number of issues related to e-Navigation.net which were captured in a liaison note to the current webmaster (Danish Maritime Authority).

Guidance on submitting testbed information is available in IALA Guideline 1107 on reporting of test bed results.

Action Item

The IALA Secretariat is requested to forward the liaison note ENAV15-14.1.3 to the e-Navigation.net webmaster in the Danish Maritime Authority.

ENAV Committee members are requested to promote the e-Navigation.net website as a valuable repository for testbed information.

ENAV Committee members are requested to encourage testbed project partners to report information on their testbeds, using the IALA reporting template, to the IALA Secretariat.

## Evaluate/analyse testbed outcomes (lessons learnt) and provide guidance (Task 4.2.1)

The committee developed a preliminary structure (ENAV 15-14.2.1) to address the evaluation and analysis of testbed outcomes. It proposed steps to be considered in evaluating testbed outcomes. The committee decided that it would be beneficial to include one or two examples to demonstrate the evaluation of testbed outcomes. The paper remains a work in progress and will be worked on intersessionally and at ENAV16. The Committee discussed the possibilities for identifying the links between current and future testbeds and, on the other hand, tasks reflected in the IMO e-Navigation Strategy Implementation Plan (SIP). It is foreseen that some proposals will be drafted for the next Committee meeting.

Action Item

Jin Hyoung Park, Michael Bergmann and Michael Siegel are requested to further develop the preliminary structure (ENAV 15-14.2.1) to address the evaluation and analysis of testbed outcomes.

The IALA Secretariat is requested to bring ENAV15-14.2.1 on the evaluation and analysis of testbed outcomes forward to ENAV16.

ENAV Members are requested to contribute intersessionally to the development of ENAV15-14.2.1 on evaluation and analysis of testbed outcomes.

## Support IMO with the future development and implementation of e-Navigation and contribute to related tasks (Task 4.5.1)

The Committee considered the 18 Tasks identified in the SIP and developed suggestions as to which tasks could be addressed, in whole or in part, by IALA. As e-Navigation impacts across all IALA Committees, the specific IALA Committee to lead / co-ordinate each relevant task was identified. A liaison note (ENAV15-14.1.4) was developed which should be sent to all committees and PAP for their information.

If the SIP is approved by IMO MSC in November 2014, this information can also be used by the IALA secretariat to advise IMO of IALA’s views on how it could contribute to further the tasks identified in the SIP.

Action Item

The IALA Secretariat is requested to forward ENAV15-14.1.4 identifying potential areas for IALA to contribute to the e-Navigation tasks to all Committees and PAP.

If the SIP is approved by IMO MSC in November 2014, the IALA Secretariat is requested to draw on the information provided in ENAV15-14.1.4 and prepare a submission for the approval of the IALA Council in December 2014 and further submission to IMO NCSR 2 with deadline of 2nd January 2015.

## Maintain forums to discuss testbed-related issues (Task 4.4)

The Committee identified various discussion forums related to e-Navigation. Several members expressed concern that these discussion forums were blocked to some users because they were characterized by their administrations or IT service providers as social media. The committee proposed that use could be made of an open source web forum hosted by the IALA website. The issue of whether the reflector location should be on the public or Committee side of the website is being considered. A working paper (ENAV15-14.2.2) was developed outlining the issues and various options. A robust discussion followed the presentation of the working paper.

The group agreed that it would be beneficial for dedicated time be set aside at each ENAV Committee meeting for members and any testbed project managers present to discuss the results of their testbeds.

Action Item

The Chair and Vice-Chair of the ENAV Committee are requested to consider reserving time during the working week for members and any testbed project managers present to discuss the results of their testbeds.

The IALA Secretariat is requested to forward ENAV15-14.2.2 on e-Navigation Discussion Forums to ENAV 16.

Interested ENAV Committee members are requested to contact Steve Burrows regarding e-Navigation Testbed Discussion Forums.

# Working Groups 3 - Telecommunications (WG3)

Working Group 3 was asked to review and respond, as necessary, to input papers ENAV15-10.1 through ENAV15-10.19.

## Develop VDES Message Structures (1.4.1)

Work will progress on this task beginning ENAV17.

## Develop e-NAV Message Structure (1.4.2)

Work will progress on this task beginning ENAV17.

## Update the Marine Radio Communication Plan (Task 2.1.1)

Work will progress on this task beginning ENAV20 or earlier.

Action

The WG3 Chair is requested to consider the programme for Task 2.1.1 with a view to commencing as early as possible.

Committee Members are requested to submit input on the date for updating the Marine Radio Communications Plan, ENAV work task 2.1.1 to ENAV16.

## Develop Recommendation on VDES (2.1.2)

Input Papers ENAV15-10.9 and ENAV15-10.10 refer.

Progress work on the ITU document - Working Document Toward a Preliminary Draft New Recommendation ITU-R M.[VDES]. Currently, the primary focus is on describing behaviour and use on the ASM channels. During this meeting the Committee clearly defined those areas that will need further definition providing focus for the work going forward. This document will continue to be a working document and will be further progressed during an intercessional meeting to be planned for the end of February 2015.

## Update Recommendations and Guidelines for AIS (Task 2.2.1)

This is an on-going task to review the AIS documentation.

### Update IALA Recommendation A-126: The Use of the Automatic Identification System (AIS) in Marine Aids to Navigation Services;

Relevant Input Papers: ENAV15-10.16, ENAV15-10.3, and an informal input from AMSA via email.

IALA Recommendation A-126 has been updated to reflect requested changes requested from IEC and to reflect, as appropriate, decisions from IMO. The Committee has created a liaison back to IEC acknowledging the required changes to A-126. The Committee has also created a liaison to the ARM committee for comment before publication. In the event that the ARM Committee does not have comment, the Secretariat will forward the document to Council for approval and publication. ENAV15-14.1.9 was approved for submission to Council.

Action

The IALA Secretariat is requested to forward A-126, ENAV15-14.1.9, and liaison note, ENAV15-14.1.10, to the ARM Committee for review.

The IALA Secretariat is requested to forward Recommendation A-126, ENAV15-14.1.9, to Council if the ARM Committee has no comment.

The IALA Secretariat is requested to forward the revised version of Recommendation A-126, ENAV15-14.1.9, to IEC TC80, in the event of approval by the IALA Council.

### Update IALA Guideline an Overview of AIS 1082

Relevant Input Papers: ENAV15-10.17

The Committee has begun modifying the AIS Overview document 1082 to inform the AIS community on the possibility of AIS spoofing. During this review it was noted that other updates are necessary and work will continue on this document at ENAV16.

Action

The Secretariat is requested to forward Paper 14.2.45 to ENAV16

### Update IALA Guideline Virtual AtoN 1081

Paper ENAV15-10.16 refers.

During the review of virtual/synthetic clarification, other problems with 1081 and the use of AIS on AtoN were found. A liaison note to the ARM committee was drafted explaining why the Committee is suggesting changes to 1081, Paper ENAV15-14.1.11.

Action

The IALA Secretariat is requested to forward the liaison note on revision of Guideline 1081, ENAV15-14.1.11, to the ARM Committee.

### Create a new Guideline for VDES based on existing working documents;

Relevant Input Papers: ENAV15-10.1, ENAV15-10.2, ENAV15-10.6 (annex 2), ENAV15-10.9, ENAV15-10.11.

Each of the input papers described different aspects of the VDES. The Committee combined these into a single reference document describing the intended use of VDES. This document will eventually become a guideline for VDES. ENAV15-14.2.43 refers.

#### Create a new Recommendation for VDES

Input Papers ENAV15-10.12, ENAV15-10.13, ENAV15-10.17 refer.

Work commenced to create a new IALA Recommendation for VDES. At this time the document will provide guidance to the IALA membership on the innovative use of AIS and how these market driven applications might be handled by VDES and transferred from the AIS channels. The document will also provide advice on how to transition applications from the AIS channels to the ASM channels. ENAV15-14.2.44 refers.

## Manage Application Specific Message (ASM) catalogue (Task 2.3.1)

Work will progress on this task beginning ENAV16 for ASM messages and if applicable this same catalogue will be used for VDE with work beginning ENAV20.

## Monitor Developments with GMDSS Modernization (Task 2.4.1)

With reference to the discussion in NCSR-1 the Committee discussed a potential role of the Committee, particularly for WG3 in the coordination of common communication aspects of e-Navigation and GMDSS. The Committee agreed that there was a role and it was decided to insert a task in the work plan.

Action

The Chair of WG3 is requested to liaise with the Chair of the IMO GMDSS WG (Bob Markel, RTCM) regarding coordination of common communication aspects of e-Navigation and GMDSS.

# Working group 4 - e-Nav Services (WG4)

## Work plan

The main focus and output is the work program for the next sessions. It was considered that this is fundamentally important to achieving good results and delivering effective services. The work plan reflects the need to associate particular user needs with e-Navigation services under IALA’s remit for delivery. The next stage in the work program is the further development of the e-Navigation services and the production of a Guideline. A draft work plan was developed and delivered.

After finalizing the work program, the Committee will start to develop the first concepts of attributes for MSI (MSP 5) taking into account existing recommendation from IHO. The work will be further progressed intercessional by correspondence to produce a required services matrix template in accordance with the work program.

## Liaison note to PAP regarding non-SOLAS vessels access to e-Navigation services

Responding to a request from PAP28, the Committee prepared a draft position paper, ENAV15-14.1.13, considering whether or not IALA should include the possibility for non-SOLAS vessels to access some e-Navigation services using any available equipment such as tablets and mobile phones.

Action

The Secretariat is requested to forward Paper ENAV15-14.1.13, IALA position paper on the possibility for non-SOLAS vessels to access some e-Navigation services, to the PAP.

# Working Group 5 – PNT (WG5)

The Committee was asked to respond to a number of input papers. The Committee reviewed the terms of reference and developed a workplan. From the development of the workplan, each work item was then captured on a task sheet, although these have not been formally reviewed yet as a whole.

The Committee continued work from the last work period as well as considering new work, each of which is covered under each of the work areas below.

## Develop guidelines on eLoran, including data formats and ASF (Task 3.1.1)

No further work was completed on this item in this session. It was considered that the draft version of ENAV15-14.2.4 should be worked on intersessionally, via email correspondence.

Action Item

The IALA Secretariat is requested to forward working paper ENAV15-14.2.4 to ENAV16.

## Develop a product specification on eLoran data, beacon corrections and data exchange (Task 3.1.2)

A Task Group was formed to investigate the best approach to defining the required formats for product specification on eLoran data, beacon corrections and data exchange, and will report at ENAV16. The Committee prepared a statement of work for the Task Group (ENAV15-14.2.5).

Action Item

The IALA Secretariat is requested to forward working paper ENAV15-14.2.5 to ENAV16.

## Recommendation on the PNT relevant services & systems that can contribute to Resilient PNT (Task 3.1.3)

No further work was completed on this item in this session.

## Develop a Guideline on port and harbour high accuracy systems and services (Task 3.1.4)

No further work was completed on this item in this session.

## Develop a Guideline on the use of SBAS (Task 3.1.5)

No further work was completed on the Guideline.

However, the Committee was invited to consider the technical requirements of providing SBAS data via VDES. A data capture sheet was provided by WG3 and was subsequently completed. The input paper (ENAV15-14.2.7) and data capture sheet (ENAV15-14.2.41) will be forwarded to the next ENAV meeting for the attention of WG3 and WG5.

Action Item

The IALA Secretariat is requested to forward working papers ENAV15-14.2.7 and ENAV15-14.2.41 to ENAV16.

## Develop a Guideline on PNT techniques used in Pilot Portable Unit (Task 3.1.6)

The suitability of this task item was discussed and the Committee decided to remove this task item from the draft workplan.

## Develop a Guideline on the techniques used for on-board PNT data processing (Task 3.1.7)

No further work was completed on this item in this session.

## Develop a Guideline on PNT performance status message for e-Nav services (Task 3.1.8)

No further work was completed on this item in this session.

## Revise Recommendation R-121 (Task 3.1.9)

The Committee reviewed Recommendation R-121 and developed a draft version (ENAV15-14.2.3). Due to the significant changes made to this Recommendation, all Committee members were invited to review the document before it is presented for approval at ENAV16.

Action Item

The IALA Secretariat is requested to forward working paper ENAV15-14.2.3) to ENAV16.

ENAV Committee members are requested to review working paper ENAV15-14.2.3 prior to ENAV16 and to provide any comments to the WG5 Vice Chair.

## Develop a Guideline on DGNSS Radiobeacon coverage prediction (Task 3.1.10)

No further work was completed on this item in this session.

## Monitor development in GNSS, DGNSS, radar, resilient PNT, ePelorus, terrestrial systems, inertial and any other relevant areas. (Task 3.1.11)

The Committee received updates on:

* R-mode developments within the ACCSEAS project, using MF, VHF and LF transmissions;
* The findings of the AMSA DGPS Survey;
* The multi-source receiver performance standard currently being considered by the IMO NCSR sub-committee;
* Discussed the use of SBAS in maritime.

The Committee also considered whether a WWA course on satellite navigation would be worthwhile and concluded that it would be.

Action

The Academy is requested to submit a draft WWA model course on satellite navigation to ENAV16.

## Liaise with RTCM on broadcast standards and ITU on M.823 (Task 3.1.12)

It was noted that work on a revision of ITU-R M.823 could not start until RTCM SC104 has completed the revision of the Version 2.x broadcast standard.

## Liaise with IMO on PNT matters (including revision of Res. A.915) (Task 3.1.13)

The Committee considered the need to revise IMO Resolution A.915 and felt that it was required. As such, the Committee considered it necessary to get the input of the end user and has prepared a Liaison note to the ARM Committee seeking its comments (ENAV15-14.1.5).

The Committee also considered a submission to the IMO on how to assess different radionavigation systems from the point of view of resilient PNT (ENAV15-14.2.40). This INF paper was not finalised in this session and will be carried over to ENAV16.

Action

The IALA Secretariat is requested to forward Liaison Note (ENAV15-14.1.5) to the ARM Committee.

The IALA Secretariat is requested to include the working paper (ENAV15-14.2.40) as an input paper to the next meeting.

## Maintain WG relevant Recommendations and Guidelines (Task 3.1.14)

It was deemed necessary to review which documents are the responsibility of WG5. Three WG members have taken actions to review the Guidelines, Recommendations and Other documents and report back at ENAV16. A list of WG relevant papers was produced and will be maintained as a working paper (ENAV15-14.2.39).

The Committee considered procedures for managing DGNSS information requests to IALA (ENAV15-14.2.6) and will carry this over to the next meeting.

Action

The IALA Secretariat is requested to forward working papers ENAV15-14.2.39 and ENAV15-14.2.to ENAV16.

## Liaison with IEC, ITU, CIRM, RTCM and other bodies on PNT matters (Task 3.1.15)

The Committee received updates on the RTCM SC104 & RTCM SC131 September meetings.

# review of work programme

The Committee prepared a work programme for the work period 2014-1018 (ENAV15-14.1.2). It was noted that this is a living document and is subject to change. It is supplemented by the task register, ENAV15-14.2.51, which provides detailed descriptions of the tasks in the work plan.

Progress in carrying out the ENAV Committee work programme is shown in ANNEX F.

In discussion, concern was expressed regarding the availability of expertise in the ENAV Committee to develop MSPs. While it is possible to use expertise from outside IALA, the documents are IALA documents and must remain within the scope of IALA activity, possibly limited by the expertise within IALA. Guideline 1087 includes how to set up task groups. It was noted that a proposal to e-NAV14 on harmonisation of MSP development was not considered.

It was agreed that:

* WG4 will provide operational aspects in the form of user requirements;
* WG1 will provide technical aspects.
* Outputs from both WGs will be forwarded to a task force which will operate across Committees, drawing subject experts from all Committees. A harmonisation group was proposed to e-NAV14 (e-NAV14-12.3.1);
* The Committee will review the e-NAV14 proposal for harmonisation group for development of MSPs, Paper e-NAV14-12.3.1 refers.

Action

The Secretariat is requested to forward the ENAV Committee work plan for 2014-2018 (ENAV15-14.1.2) to the Council for approval.

Working Group Chairs are requested to review and update the draft Workplan Task Register, ENAV15-14.2.51 and submit to ENAV16.

The Secretariat is requested to forward Paper e-NAV14-12.3.1 to ENAV16.

# Review of output and working papers

Output papers were reviewed and their disposition agreed as indicated in ANNEX E.

# Any Other Business

Committee members were invited to participate in the 3rd Annual ACCSEAS conference which will be held from 17th to 19th February 2015 in Rotterdam, The Netherlands. At this free of charge conference, testbeds results and demonstrators in will be presented in relation to testbeds in the Southern part of the North Sea.

A seminar on e-Navigation infrastructure in 2015 or 2016 was proposed.

Action

Anders Brojde is requested to submit a proposal for a seminar on e-Navigation infrastructure for approval of Council.

It was noted that a Rapporteur is required between the ENAV and VTS Committees.

Action

Omar Frits Eriksson is requested to invite Jon Leon Ervik to act as Rapporteur between the ENAV and VTS Committees.

The Chairman noted that promulgation of AIS data to the public is discouraged by the IMO. DMA has the largest repository of AIS data, both real time and historical but promulgation is limited. China is leading the way in terms of providing AIS information on the World Wide Web through presenting all their data on a web site.

The Secretary General thanked the Chair, Vice Chair and Working Group Chairs. He noted the successful start to the four year work programme and the importance globally of the work of the ENAV Committee. He mentioned the record number of participants and input papers. He thanked all participants, noting that IALA would not be IALA without them.

In recognition of his five years of excellent service as IALA Secretary General, the Committee made a presentation to Gary Prosser and wished him well following his departure from IALA.

In appreciation of his service as chairman of the Committee, the Committee made a presentation to Bill Cairns. It was noted that under his leadership, the Committee has grown to it present status through times of great challenges and change. He was thanked for continuing to attend Committee meetings.

# Review of session report

The report of the meeting (ENAV15-16.1) was reviewed and approved by the Committee.

Action item

The Secretariat is requested to forward the report of ENAV14 (ENAV15-16.1) to the Council, to note.

# Date and venue of next meeting

ENAV16 is expected to meet on 20 - 24 April 2015 at IALA HQ.

# Closing of the meeting

The Chairman expressed his thanks to all Members for what the Committee had achieved during the week and for planned intersessional work. He invited all participants to attend ENAV16. He then wished everyone a safe journey home, saying that he hoped to see everyone again at the next meeting. He then declared the meeting closed.

# List of Annexes to the report

1. Agenda

A copy of the agenda is at ANNEX A.

1. Participants

A list of participants and apologies is at ANNEX B.

1. Working Groups – List of participants

A list of Working Group participants is at ANNEX C.

1. Input Papers

A list of input papers is at ANNEX D.

1. Output and Working Papers

A list of output and working papers is at ANNEX E.

1. Work programme progress

A summary of progress in completing the work programme and progress with deliverables is at ANNEX F.

1. Action Items

A list of action items is at ANNEX G.

1. Agenda

**15th Meeting of the IALA ENAV Committee**

The 15th meeting of the **IALA ENAV Committee** will be held from 13 - 17 October, 2014 at IALA, St Germain en Laye, France.

The opening plenary will commence at 1400 hours on Monday 13 October and the closing plenary will end at approximately 1300 on Friday 17 October.

Committee Chair, Vice-Chair and Working Group Chairs are requested to meet at 0900 hours on Monday 13 October.

Work items / Tasks being addressed during this meeting are listed in the ENAV Committee Workplan 2014-2018 which will be provided on the IALA website.

**AGENDA**

1. Opening
   1. Administration & safety briefing
   2. Approval of the agenda
   3. Introductions and apologies
   4. Programme for the week
2. Review of action items from last meeting
3. Review of input papers
   1. Input papers
   2. Identify input papers suitable for uploading to the IALA Wiki
   3. Approval of papers from intersessional meetings
4. Reports from other bodies:
   1. Reports from IALA Council – 56th, 57th and 58th Sessions, December 2013 & May 2014
   2. Report from IALA General Assembly / Conference, May 2014
   3. Report from PAP26, October 2013
   4. Report from PAP27, March 2014
   5. Report from PAP28, October 2014
   6. Report from MSC93, May 2014
   7. Reports from NAV59, September 2013 & NCSR1, July 2014
   8. Report from VTS38, October 2014
   9. Reports from e-Navigation Underway 2014 & e-Navigation Underway N America 2014
5. Reports from Rapporteurs:
   1. Monitor and report progress on related systems
   2. IALA Bulletin Hideki Noguchi
6. Presentations (15 minutes duration)
   1. IALA Strategy Michael Card
   2. WWA update Stephen Bennett
   3. ENAV2014 Conference, Seattle, November 2014 Bill Cairns
   4. Outcome of the Korean testbed for the MONALISA/ACCSEAS route exchange Thomas Porathe
   5. Update on IALA DGNSS data gathering and filing Cho Yong Hun
   6. R-Mode for resilient PNT Michael Hoppe
7. Establish Working Groups
8. WG 1 - Harmonization
9. WG 2 - Implementation
10. WG 3 - Telecommunication
11. WG 4 - ENAV Services
12. WG 5 - PNT
13. Review of Work Programme
14. Review of output and working papers
15. Any Other Business
16. Review of session report
17. Date and venue of next meeting
18. Close of meeting.
19. List of Participants

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1. List of Input Papers

**All papers are posted on the IALA Committee website**

| Meeting | Agenda Item | Title / Author (if required) | Source | Presented by / WG |
| --- | --- | --- | --- | --- |
| ENAV15- | 1.2 | Draft Agenda Rev14 | IALA Sec | Omar Frits Eriksson |
| ENAV15- | 1.3 | W Cairns Letter to IALA ENAV Committee | Bill Cairns | Omar Frits Eriksson |
| ENAV15- | 1.4 | Programme for the week | IALA Sec | Omar Frits Eriksson |
| ENAV15- | 2.1 | Action items from e-NAV14.docx | e-NAV14 | Seamus Doyle |
| ENAV15- | 2.1.1 | Reservation from Japan Coast Guard re WG 3 + 4 inter-sessional meeting output | Comms + AIS WG intersessional | Omar Frits Eriksson |
| ENAV15- | 2.1.2 | Report e-NAV14 | e-NAV14 |  |
| ENAV15- | 3.1.1 | Input papers list ENAV15 Rev1 | IALA Sec | Omar Frits Eriksson |
| ENAV15- | 3.1.2 | Input papers template | IALA Sec | Seamus Doyle |
| ENAV15- | 3.3.1 | Working Document Toward a Preliminary draft New Recommendation ITU-R M[VDES] r1.docx | Comms WG intersessional | Bill Kautz |
| ENAV15- | 3.3.2 | ENAV15-3.3.2 IALA submission to ITU WP5B on VDES from IALA ENAV Comms WG - urgent approval.pdf | Comms WG intersessional | WG3 |
| ENAV15- | 4.1.1 | Council 56 Report 2013-12-13 | IALA Sec | Omar Frits Eriksson |
| ENAV15- | 4.1.2 | Council 57 Final Report | IALA Sec | Omar Frits Eriksson |
| ENAV15- | 4.1.3 | Council 58 Final Report | IALA Sec | Omar Frits Eriksson |
| ENAV15- | 4.2.1 | Report - 18th IALA Conference | IALA Sec | Omar Frits Eriksson |
| ENAV15- | 4.2.2 | Pre-18th IALA Conference Seminar Report final | IALA Sec | Stephen Bennett |
| ENAV15- | 4.2.3 | (PAP28-14.3) 18th IALA Conference Conclusions and Actions | IALA Sec | Seamus Doyle |
| ENAV15- | 4.3.1 | Report of PAP26 | IALA Sec | Omar Frits Eriksson |
| ENAV15- | 4.4.1 | Report of PAP27 | IALA Sec | Omar Frits Eriksson |
| ENAV15- | 4.5.1 | (PAP28-14.1) Report of PAP28 | IALA Sec | Michael Card |
| ENAV15- | 4.6.1 | MSC 93-22 - Report Of The Maritime Safety Committee meeting | IMO | Omar Frits Eriksson |
| ENAV15- | 4.7.1 | IMO NAV59 Report | Michael Card | Michael Card |
| ENAV15- | 4.7.2 | MDC report of IMO NCSR1 | Michael Card | Michael Card |
| ENAV15- | 4.8.1 | (VTS38-14) draft Report VTS38 | VTS38 | Omar Frits Eriksson |
| ENAV15- | 4.9 | e-Nav Underway USA Conference Communique v1.6 | Fred Pot | WG2 |
| ENAV15- | 4.9.1 | e-Navigation Underway 2014 report | IALA Sec | Omar Frits Eriksson |
| ENAV15- | 4.10 | ENAV15-4.10 (CSSA1-5.1) IALA Workshop on Employing the e-Nav Common Shore-Based System Architecture (CSSA) - Report.pdf | CSSA WS | Jan-Hendrik Oltmann |
| ENAV15- | 5.1.1 | Resilient PNT Forum | Nick Ward | Michael Card |
| ENAV15- | 6.1.1 | IALA Strategic Vision 2012-2026 | IALA Sec | Michael Card |
| ENAV15- | 6.1.2 | IALA Committee Structure 2014-2018 | IALA Sec | Michael Card |
| ENAV15- | 6.2.1 | Presentation IALA WWA brief Oct 14 Rev 0 | Stephen Bennett | Stephen Bennett |
| ENAV15- | 6.3 | eNavigation Conference Seattle | Bill Cairns | Bill Cairns |
| ENAV15- | 6.4.1 | Presentation - Ship traffic management route exchange - acceptance in Korea and Sweden V1 | Thomas Porathe | Thomas Porathe |
| ENAV15- | 6.4.2 | Presentation - Second Collaborated Test for e-Nav Solutions in Korean Waters | Jin Hyoung Park | Jin Hyoung Park |
| ENAV15- | 6.5 | Presentation - 2014 IALA DGNSS list update | Yonghun CHO | Yonghun CHO |
| ENAV15- | 6.6 | Presentation - R-Mode for resilient PNT | Michael Hoppe | Michael Hoppe |
| ENAV15- | 6.7 | Presentation - Introduction to Navigation Aid Integrated Application System | Zhixiu Du | Zhixiu Du |
| ENAV15- | 7.1 | TOR ENAV WG1 - Harmonization rev2 | Omar Frits Eriksson | Omar Frits Eriksson |
| ENAV15- | 7.2 | TOR ENAV WG2 - Implementation rev2 | Omar Frits Eriksson | Omar Frits Eriksson |
| ENAV15- | 7.3 | TOR ENAV WG3 - Telecommunication rev2 | Omar Frits Eriksson | Omar Frits Eriksson |
| ENAV15- | 7.4 | TOR ENAV WG4 - ENAV Services rev2 | Omar Frits Eriksson | Omar Frits Eriksson |
| ENAV15- | 7.5 | TOR ENAV WG5 - PNT rev2 | Omar Frits Eriksson | Omar Frits Eriksson |
| ENAV15- | 8.1 | Draft Rec on CSSA System Layout 20130920 Mueller-Oltmann Collected Edits | e-NAV14 | WG1 |
| ENAV15- | 8.2 | Unique identifiers for AtoNs - Identification of AtoNs in Nautical Publications.docx | Nick Ward Peter Hooijmans | WG1 |
| ENAV15- | 8.3 | Note on draft Revision of Recommendation e-NAV-140 | e-NAV14 | WG1 |
| ENAV15- | 8.4 | e-NAV14-12.2.3 e-NAV9-1-6B DraftRevisionOfRec e-NAV-140 on e-Navigation Architecture-ShorePerspective(Ed2)\_2-18\_2011-01-21.doc | e-NAV14 | WG1 |
| ENAV15- | 8.5 | Draft Revision of Recommendation e-NAV-140 | e-NAV14 | WG1 |
| ENAV15- | 8.6 | IALA Recommendation on the IALA Common Shore-based System Architecture (CSSA) 20130925d | e-NAV14 | WG1 |
| ENAV15- | 8.7 | Proposal for Revision of IMO A.915 | Nick Ward | WG5 |
| ENAV15- | 8.8 | IALA Workshop on Employing the e-Navigation Common Shore-Based System Architecture (CSSA) | CSSA WS | WG1 |
| ENAV15- | 8.9 | Main Draft IALA Recommendation On Generic Service Engineering Model 20140904 Amended | CSSA WS | WG1 |
| ENAV15- | 8.10 | Appendix 00-Glossary Etc Rec-Generic Service Eng Model V0-06 20140812 | CSSA WS | WG1 |
| ENAV15- | 8.11 | Appendix 01-Basic Service Categories Definitions Etc Rec-GenericServiceEngModel V0-06 20140812 | CSSA WS | WG1 |
| ENAV15- | 8.12 | Appendix 02- Data Objects Of A Service - Service Data Mode\_Rec-GenericServiceEngModel\_V0-06\_20140812 | CSSA WS | WG1 |
| ENAV15- | 8.13 | Appendix 03 - Distribution Model - Rec-GenericServiceEngModel\_V0-06\_20140812 | CSSA WS | WG1 |
| ENAV15- | 8.14 | Appendix 04 - Interaction + Data Storage Model\_Rec-GenericServiceEngModel\_V0-06\_20140812 | CSSA WS | WG1 |
| ENAV15- | 8.15 | Appendix05 - Interfacing Model\_Rec - GenericServiceEngModel\_V0-06\_20140903 with ALL subgroup Comments v1.1 Amended | CSSA WS | WG1 |
| ENAV15- | 8.16 | Appendix 06 - Interna Time Latency Model Rec - GenericServiceEngModell\_V0-06\_20140812 | CSSA WS | WG1 |
| ENAV15- | 8.17 | Appendix07 - Reliability Model - Rec-GenericServiceEngModel\_20140826 Amended | CSSA WS | WG1 |
| ENAV15- | 8.18 | Appendix 08 - test models - GenericServiceEngModel\_V0-06\_20140829 Amended | CSSA WS | WG1 |
| ENAV15- | 8.19 | Appendix09 - Logical Shore Station - Rec-GenericServiceEngModel\_V0-06\_20140812 | CSSA WS | WG1 |
| ENAV15- | 8.20 | Appendix 10.1 - Physica Layer As A Whole - Rec-GenericServiceEngModel\_V0-06\_20140812 | CSSA WS | WG1 |
| ENAV15- | 8.21 | Appendix 10.2 - Physical Shore Station - Rec-GenericServiceEngModel\_V0-06\_20140812 | CSSA WS | WG1 |
| ENAV15- | 8.22 | Appendix 10.3 - Physical Link Terminal Equipm - Rec-GenericServiceEngModel\_V0-06\_20140812 | CSSA WS | WG1 |
| ENAV15- | 8.23 | Appendix 10.4 - Physical Link Couplers - Rec-GenericServiceEngModel\_V0-06\_20140812 | CSSA WS | WG1 |
| ENAV15- | 8.24 | Appendix11 - Service Management - Rec-GenericServiceEngModel 20140829 Amended | CSSA WS | WG1 |
| ENAV15- | 8.25 | Appendix12 - Site Co-Location Issue - Rec-GenericServiceEngModel\_V0-06\_20140812 | CSSA WS | WG1 |
| ENAV15- | 8.26 | Appendix13 - Efficient Operation + Maintenance - Rec-GenericServiceEngModel 20140829 Amended | CSSA WS | WG1 |
| ENAV15- | 8.27 | Appendix14 - Runtime Configuration Management - Rec-GenericServiceEngModel 20140829 Amended | CSSA WS | WG1 |
| ENAV15- | 8.28 | Liaison note to eNAV on S100 PS | ANM21 | WG1 |
| ENAV15- | 8.29 | Intersessional meeting of Data Modelling WG 2014-02-25 - Report | Data Modelling WG intersessional | WG1 |
| ENAV15- | 8.30 | Liaison note from eNAV to IHO re Data Modelling | Data Modelling WG intersessional | WG1 |
| ENAV15- | 8.31 | Annex Liason note IHO re Data Modelling | Data Modelling WG intersessional | WG1 |
| ENAV15- | 8.32 | S-100 Appendix 4A\_service | Data Modelling WG intersessional | WG1 |
| ENAV15- | 8.33 | Draft Revision Of Rec e-NAV-140 on e-Navigation Architecture-Shore Perspective(Ed2)a | e-NAV14 | WG1 |
| ENAV15- | 8.34 | Proposed SIP structure | e-NAV14 | WG1 |
| ENAV15- | 8.35 | NCSR1- DRAFT comment related to the e-Navigation SIP final-V2 | Comms + AIS WG intersessional | WG1 |
| ENAV15- | 8.36 | Proposal for a Standard for Interfaces among Shore-side Systems using UPnP | Fred Pot | WG1 |
| ENAV15- | 8.37 | S-200 status report | Nick Ward | WG1 |
| ENAV15- | 8.38 | (e-Nav14-17.2.5.1) Relationship Between e-Navigation Technical Architecture Documents | e-NAV14 | WG1 |
| ENAV15- | 8.39 | (VTS38-12.1.6) Liaison note on CSSA to e-NAV regarding VTS38 9\_2\_7 | VTS38 | WG1 |
| ENAV15- | 8.40 | (VTS38-12.1.7) Liaison note on e-NAV-140 to e-NAV regarding VTS38 9\_2\_8 | VTS38 | WG1 |
| ENAV15- | 8.41 | (e-NAV14-12.3.1) Harmonisation of MSPs - Considerations 20130917 | e-NAV14 | WG1 |
| ENAV15- | 9.1 | ACCSEAS Conference Report 2014 WG4 | ACCSEAS | WG2 |
| ENAV15- | 9.2 | Ship traffic management route exchange: acceptance in Korea and Sweden, a cross cultural study | Fred Pot | WG2 |
| ENAV15- | 10.1 | Information Paper on VDES v1 | WG3/4 | WG3 |
| ENAV15- | 10.2 | Information Paper on Technical Guidelines for implenetation of VDES v1 | e-NAV14 | WG3 |
| ENAV15- | 10.3 | WG15 MTG15 O 005 Liason to IALA on AIS AtoN Status Bits 19-Sep-2014 | Bill Kautz | WG3 |
| ENAV15- | 10.4 | Report of the intersessional AIS + Comms WG3 + WG4 meeting | Comms + AIS WG intersessional | WG3 |
| ENAV15- | 10.5 | Annex15\_testbed\_list - Planed or on-going testbeds for VDES development | Comms + AIS WG intersessional | WG3 |
| ENAV15- | 10.6 | Liaison statement to ITU for channel plans | Comms + AIS WG intersessional | WG3 |
| ENAV15- | 10.7 | CPM 1.16 Output V2 Rev1 | Comms + AIS WG intersessional | WG3 |
| ENAV15- | 10.8 | ENAV15-10.8 Report of the intersessional WG2 Comms meeting R1 SEP 2014 Output 01.docx | Comms + AIS WG intersessional | WG3 |
| ENAV15- | 10.9 | VDES User Requirements to Technical Requirements Template v2 | Comms + AIS WG intersessional | WG3 |
| ENAV15- | 10.10 | Design considerations for VDES | Comms + AIS WG intersessional | WG3 |
| ENAV15- | 10.11 | Demonstration objectives for VDES | Comms + AIS WG intersessional | WG3 |
| ENAV15- | 10.12 | ASM channe- use during the transition to VSES SEP-2014-WD 04 | Comms + AIS WG intersessional | WG3 |
| ENAV15- | 10.13 | e-NAV14-17 2 3 1 working document on the innovative use of ais - St Germain SEP 2014 WD 05 | Comms + AIS WG intersessional | WG3 |
| ENAV15- | 10.14 | Proposal for Extending SBAS Coverage using VDES | Nick Ward | WG3 |
| ENAV15- | 10.15 | VDES Waveform Study | Nick Ward | WG3 |
| ENAV15- | 10.16 | AIS AtoNs - revision of IALA Rec A-126 | Nick Ward | WG3 |
| ENAV15- | 10.17 | Guidance on AIS Vulnerability | Nick Ward | WG3 |
| ENAV15- | 10.18 | (VTS38-12.1.5) Liaison note on VDES implementation to e-NAV regarding VTS38 9\_2\_6 | VTS38 | WG3 |
| ENAV15- | 10.19 | (VTS38-12.1.4) Liaison note on VDES to e-NAV regarding VTS38 9\_2\_5 | VTS38 | WG3 |
| ENAV15- | 11.1 | Streaming data to deliver data in s100 rev2 from s 100 workshop june 2013 | e-NAV14 | WG1 |
| ENAV15- | 12.1 | R-121 Draft 4 eNAV14 WG2 Review v2 | e-NAV14 | WG5 |
| ENAV15- | 12.2 | Draft guideline on eLoran service provision - WG2 review up to Chapter 4 at e-NAV14 | e-NAV14 | WG5 |
| ENAV15- | 12.3 | ACCSEAS R-Mode\_Study\_MF-Beacon\_final\_20140311 WG3 | Michael Hoppe | WG5 |
| ENAV15- | 12.4 | PNT databases | Nick Ward | WG5 |
| ENAV15- | 12.5 | Procedures for Managing DGNSS Information | Nick Ward | WG5 |
| ENAV15- | 12.6 | Draft R-121 amended following e-NAV14 2014-09-20 - ajg | Alan Grant | WG5 |
| ENAV15- | 12.7 | INF - WG5 plan for ENAV15 (draft) | Alan Grant | WG5 |
| ENAV15- | 12.8 | Feasibility Study of R-Mode using AIS Transmissions | Michael Hoppe | WG5 |
| ENAV15- | 12.9 | Requirements for Resilient PNT | Nick Ward | WG5 |
| ENAV15- | 12.10 | AMSA DGPS Survey - final | Mahesh Alimchandani | WG5 |
| ENAV15- | 12.11 | AMSA DGPS Survey findings | Mahesh Alimchandani | WG5 |
| ENAV15- | 12.12 | INF paper on outcomes of AMSA DGPS survey | Mahesh Alimchandani | WG5 |
| ENAV15- | 12.13 | ACCSEAS Feasibility Study of R-Mode combining MF DGNSS AIS eLoran | Alan Grant | WG5 |
| ENAV15- | 13.1 | Potential ENAV documentation for 2014 BC 2014-03-25 | Bill Cairns | Omar Frits Eriksson |
| ENAV15- | 13.2 | ENAV Committee Workplan 2014-2018 v4 2014-10-13 | C/VC ENAV | Omar Frits Eriksson |
| ENAV15- | 13.3 | Work Programme Task Register master - with VTS example | VTS38 |  |

1. List of Output and Working Papers

Output papers are submitted for review by a body other than the Committee initiating the paper.

| Number | | Title | Status |
| --- | --- | --- | --- |
| ENAV15- | 14.1.1 | Working Document Toward a Preliminary draft New Recommendation ITU-R M[VDES].docx | To ITU-WP5B  To ENAV16 |
| ENAV15- | 14.1.2 | ENAV Committee Workplan 2014-2018 | To Council for approval |
| ENAV15- | 14.1.3 | Liaison note to Danish Maritime Authority update of e-Navigation.net | To e-Navigation.net Coordinator |
| ENAV15- | 14.1.4 | Liaison note to all Committees and PAP on IALA involvement with IMO SIP Tasks | To All Committees and PAP |
| ENAV15- | 14.1.5 | Liaison note e-NAV to ARM committee on revision of IMO Resolution A915 | To ARM Committee |
| ENAV15- | 14.1.6 | ENAV Committee WG Terms of Reference | To Council for approval |
| ENAV15- | 14.1.7 | Liaison note from eNAV to Committees and PAP | To Committees and the PAP |
| ENAV15- | 14.1.9 | Recommendation A-126 On The Use of the Automatic Identification System (AIS) in Marine Aids to Navigation Services | To ARM committee for review  To Council for approval after ARM  To IEC TC80 after Council |
| ENAV15- | 14.1.10 | Liaison note to ARM on A-126 | To ARM committee |
| ENAV15- | 14.1.11 | Liaison note to ARM recommending review of 1081 | To ARM committee for action |
| ENAV15- | 14.1.12 | Liaison note to ARM and SG - Persistent Unique Identifier (PUI) for AtoN into S-100 | To ARM Committee and Secretary General |
| ENAV15- | 14.1.13 | IALA position paper on the possibility for non-SOLAS vessels to access some e-Navigation services v3 | To PAP |
| ENAV15- | 16.1 | Report of ENAV15 | To Council for noting |

Working Papers are papers that will remain within the committee for further review.

| Number | | Title | Status |
| --- | --- | --- | --- |
| ENAV15- | 14.2.1 | WP on Testbed Analysis and Lessons Learned | To ENAV16 |
| ENAV15- | 14.2.2 | Discussion Paper on Effective Communication of Information concerning Testbeds | To ENAV16 |
| ENAV15- | 14.2.3 | Draft R121 | To ENAV16 |
| ENAV15- | 14.2.4 | Draft eLoran guideline | To ENAV16 |
| ENAV15- | 14.2.5 | Task Group statement of work | To ENAV16 |
| ENAV15- | 14.2.6 | Procedures for managing DGNSS information | To ENAV16 |
| ENAV15- | 14.2.7 | Extension of SBAS over VDES | To ENAV16 |
| ENAV15- | 14.2.8 | IALA Recommendation on the IALA Common Shore-based System Architecture (CSSA) 20130925d | To ENAV16 |
| ENAV15- | 14.2.9 | Main Draft IALA Recommendation On Generic Service Engineering Model 20140904 Amended | To ENAV16 |
| ENAV15- | 14.2.10 | Appendix 00-Glossary Etc Rec-Generic Service Eng Model V0-06 20140812 | To ENAV16 |
| ENAV15- | 14.2.11 | Basic Service Categories Definitions Etc Rec-GenericServiceEngModel V0-06 20140812 | To ENAV16 |
| ENAV15- | 14.2.12 | Appendix 02- Data Objects Of A Service - Service Data Mode\_Rec-GenericServiceEngModel\_V0-06\_20140812 | To ENAV16 |
| ENAV15- | 14.2.13 | Appendix 03 - Distribution Model - Rec-GenericServiceEngModel\_V0-06\_20140812 | To ENAV16 |
| ENAV15- | 14.2.14 | Appendix 04 - Interaction Data Storage Model\_Rec-GenericServiceEngModel\_V0-06\_20140812 | To ENAV16 |
| ENAV15- | 14.2.15 | Appendix05 - Interfacing Model\_Rec - GenericServiceEngModel\_V0-06\_20140903 with ALL subgroup Comments v1.1 Amended | To ENAV16 |
| ENAV15- | 14.2.16 | Appendix 06 - Interna Time Latency Model Rec - GenericServiceEngModell\_V0-06\_20140812 | To ENAV16 |
| ENAV15- | 14.2.17 | Appendix07 - Reliability Model - Rec-GenericServiceEngModel\_20140826 Amended | To ENAV16 |
| ENAV15- | 14.2.18 | Appendix 08 - test models - GenericServiceEngModel\_V0-06\_20140829 Amended | To ENAV16 |
| ENAV15- | 14.2.19 | Appendix09 - Logical Shore Station - Rec-GenericServiceEngModel\_V0-06\_20140812 | To ENAV16 |
| ENAV15- | 14.2.20 | Appendix 10.1 - Physica Layer As A Whole - Rec-GenericServiceEngModel\_V0-06\_20140812 | To ENAV16 |
| ENAV15- | 14.2.21 | Appendix 10.2 - Physical Shore Station - Rec-GenericServiceEngModel\_V0-06\_20140812 | To ENAV16 |
| ENAV15- | 14.2.22 | Appendix 10.3 - Physical Link Terminal Equipm - Rec-GenericServiceEngModel\_V0-06\_20140812 | To ENAV16 |
| ENAV15- | 14.2.23 | Appendix 10.4 - Physical Link Couplers - Rec-GenericServiceEngModel\_V0-06\_20140812 | To ENAV16 |
| ENAV15- | 14.2.24 | Appendix11 - Service Management - Rec-GenericServiceEngModel 20140829 Amended | To ENAV16 |
| ENAV15- | 14.2.25 | Appendix12 - Site Co-Location Issue - Rec-GenericServiceEngModel\_V0-06\_20140812 | To ENAV16 |
| ENAV15- | 14.2.26 | Appendix13 - Efficient Operation Maintenance - Rec-GenericServiceEngModel 20140829 Amended | To ENAV16 |
| ENAV15- | 14.2.27 | Appendix14 - Runtime Configuration Management - Rec-GenericServiceEngModel 20140829 Amended | To ENAV16 |
| ENAV15- | 14.2.28 | CSSA Generic Service Model Workplan | To ENAV16 |
| ENAV15- | 14.2.29 | Guideline on M2M Interfacing within the Common Shore-based System (CSS) | To ENAV16 |
| ENAV15- | 14.2.30 | Draft Revision Of Rec e-NAV-140 on e-Navigation Architecture-Shore perspective(Ed2)a | To ENAV16 |
| ENAV15- | 14.2.31 | Proposal for a Standard for Interfaces among Shore-side Systems using UPnP | To ENAV16 |
| ENAV15- | 14.2.32 | Relationship Between e-Navigation Technical Architecture Documents | To ENAV16 |
| ENAV15- | 14.2.33 | Liaison note on e-NAV-140 to e-NAV regarding VTS38 9\_2\_8 | To ENAV16 |
| ENAV15- | 14.2.34 | e-NAV14-12.3.1 Initial Considerations regarding the international harmonisation of the Maritime Service Portfolios (MSPs) | To ENAV16 |
| ENAV15- | 14.2.35 | e-NAV14-12.1.1. Report to the e-NAV Committee on the Intersessional Meeting on “the Structure of the Maritime Service Portfolios (MSPs)” | To ENAV16 |
| ENAV15- | 14.2.36 | e-NAV14-12.1.2 Working Paper ON “The Structure of the Maritime Service Portfolio(S) (MSPs)” | To ENAV16 |
| ENAV15- | 14.2.37 | e-NAV14-12.1.3 The implementation of the Maritime Service Portfolio (MSP) - a strategic perspective | To ENAV16 |
| ENAV15- | 14.2.38 | S-100 Appendix 4A\_service | To ENAV16 |
| ENAV15- | 14.2.39 | WG5 document review spreadsheet | To ENAV16 |
| ENAV15- | 14.2.40 | Suggested approach for analysing different radionavigation systems | To ENAV16 |
| ENAV15- | 14.2.41 | VDES data capture sheet | To ENAV16 |
| ENAV15- | 14.2.43 | Draft IALA Guideline for VDES | To ENAV16 |
| ENAV15- | 14.2.44 | Draft IALA Recommendation for VDES | To ENAV16 |
| ENAV15- | 14.2.45 | Revision to IALA Guideline 1082 | To ENAV16 |
| ENAV15- | 14.2.46 | Design Considerations for ASM | To ENAV16 |
| ENAV15- | 14.2.47 | Design Considerations for VDES | To ENAV16 |
| ENAV15- | 14.2.48 | Guidance on AIS vulnerability | To ENAV16 |
| ENAV15- | 14.2.49 | IALA Workshop on Employing the e-Navigation Common Shore-Based System Architecture (CSSA) - Report | To ENAV16 |
| ENAV15- | 14.2.50 | IALA Guideline 1087 on Procedures for the management of the IALA domains under the IHO GI Registry rev2 October 2014 | To ENAV16 |
| ENAV15- | 14.2.51 | ENAV Work Programme Task Register | To ENAV16 |

1. Work programme - Review of Progress with Deliverables at eNAV 15

| **Task** | **Start Session** | **Planned End Session** | **Revised End Session** | **Progress Indicator** | | | **Status Overview** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Green** | **Yellow** | **Red** |
| **WG1 – Operations** |  |  |  |  |  |  |  |
| 1.3.2. S-100 Service Orientation | 16 | 17 |  | ☒ | ☐ | ☐ | Commenced ENAV14 |
| 4.3.3. E-Navigation Risk Assessment | 16 | … … |  | ☒ | ☐ | ☐ | Task defined ENAV15 |
| 5.1.18. CSSA draft documentation | 15 | 21 |  | ☒ | ☐ | ☐ | Task defined ENAV15 |
| 5.1.19 Revise Guideline 1087 | 15 | 16 |  | ☒ | ☐ | ☐ | Task defined ENAV15 |
| 5.1.20. e-Navigation infrastructure and governance | 15 | 20 |  | ☒ | ☐ | ☐ | Task defined ENAV15 |
| **WG2 Implementation** |  |  |  |  |  |  |  |
| 4.1.1 Gather and present information testbeds (including results) globally. | 15 | On going |  |  |  |  | Commenced ENAV15 |
| 4.1.2 Maintain a global repository for test-bed results. | 15 | On going |  |  |  |  | Commenced ENAV15 |
| 4.1.3 Encourage testbed project managers to provide information and results to IALA for posting at [www.e-Navigation.net](http://www.e-navigation.net). | After 15 | On going |  |  |  |  | Commenced ENAV15 |
| 4.1.4 Update IALA Guideline 1107 on the reporting of results of e-Navigation testbeds. | 19 | 21 |  |  |  |  | Expect to commence at ENAV 19 |
| 4.2.1 Evaluate / analyse testbed outcomes (lessons learnt) and provide guidance. | 15 | ongoing |  |  |  |  | Commenced ENAV15 |
| 4.3.1 Assist the IALA membership to shape, at a high level, the scope of their testbeds. | 15 | ongoing |  |  |  |  | Commenced ENAV15 |
| 4.3.2 Coordinate an IALA Seminar on e-Navigation testbed results in 2016/17. | 16 | 19 |  |  |  |  | To commence at ENAV 16 |
| 4.3.4 Develop and maintain e-Navigation Roadmap | 16 | 20 |  |  |  |  |  |
| 4.4.1 Develop and progress an online discussion forum on testbeds. | 15 | 16 |  |  |  |  | Commenced ENAV15 |
| 4.4.2 Maintain fora to discuss testbed-related issues. | 15 | 16 |  |  |  |  | Commenced ENAV15 |
| 4.5.1 Liaise with IMO on e-Navigation implementation and related regulatory matters | 15 | ongoing |  |  |  |  | Commenced ENAV15 |
| 4.5.2 Monitor and analyse the execution of relevant tasks, in particular those in the IMO e-Navigation strategy implementation plan. | 15 | Ongoing |  |  |  |  | Commenced ENAV15 |
| 4.5.3 Provide implementation guidance on developments in the e-Navigation domain, in cooperation with other IGO/NGOs. | 15 | On going |  |  |  |  | Commenced at ENAV 15 |
| 4.5.4 Provide guidance and support to the decision-making process related to the implementation of e-Navigation. | 15 | On going |  |  |  |  | Commenced at ENAV 15 |
| 4.5.5 Support IMO with the future development and implementation of e-Navigation and contribute to related tasks. | 17 | On going |  |  |  |  | Not commenced |
| 4.5.6 Monitor ship board developments in order to provide appropriate e-Navigation services. | 16 | On going |  |  |  |  | Not commenced |
| 4.5.7 Inform IALA’s Legal Advisory Panel (LAP) of any apparent legal implications of emerging implementation issues. | 16 | On going |  |  |  |  | Not commenced |
| **WG3 Telecommunications** |  |  |  |  |  |  |  |
| 1.4.1 Develop VDES Message Structures | 17 | 21 |  |  |  |  | Commence ENAV20 |
| 1.4.2 Develop e-NAV Message Structure | 17 | 21 |  |  |  |  | Commence ENAV20 |
| 2.1.1 Update the Marine Radio Communication Plan | 20 | 21 |  |  |  |  | Commence ENAV20 |
| 2.1.2 Develop Recommendation on VDES | 15 | 21 |  |  |  |  | On-going |
| 2.2.1 Update Recommendations and Guidelines for AIS | 15 | 21 |  |  |  |  | On-going |
| 2.3.1 Manage Application Specific Message (ASM) catalogue | 16/20 | 17/21 |  |  |  |  | Commence ENAV16 and 20 |
| 2.4.1 Monitor Developments with GMDSS Modernization | 15 | 21 |  |  |  |  | On-going |
| **WG4 e-Nav Services** |  |  |  |  |  |  |  |
| 5.1.1 Develop Guideline/ Recommendation on Maritime Service Portfolios | 18 | 21 |  |  |  |  | Commence ENAV18 |
| 5.1.2 MSP1 VTS Information Service (IS) / Operational User Needs | 16 | 16 |  |  |  |  | Commence ENAV16 |
| 5.1.3 MSP2 Navigational Assistance Service (NAS) / Operational User Needs | 16 | 17 |  |  |  |  | Commence ENAV16 |
| 5.1.4 MSP3 Traffic Organization Service (TOS) / Operational User Needs | 16 | 17 |  |  |  |  | Commence ENAV16 |
| 5.1.5 MSP4 Local Port Service (LPS) / Operational User Needs | 16 | 17 |  |  |  |  | Commence ENAV16 |
| 5.1.6 MSP5 Maritime Safety Information (MSI) Service / Operational User Needs | 15 | 17 |  |  |  |  | On-going |
| 5.1.7 MSP6 Pilotage Service / Operational User Needs | 16 | 17 |  |  |  |  | Commence ENAV16 |
| 5.1.8 MSP7 Tugs Service / Operational User Needs | 16 | 17 |  |  |  |  | Commence ENAV16 |
| 5.1.9 MSP8 Vessel Shore Reporting / Operational User Needs | 16 | 17 |  |  |  |  | Commence ENAV16 |
| 5.1.10 MSP9 Telemedical Maritime Assistance Service / Operational User Needs | 16 | 17 |  |  |  |  | Commence ENAV16 |
| 5.1.11 MSP10 Maritime Assistance Service (MAS) / Operational User Needs | 16 | 17 |  |  |  |  | Commence ENAV16 |
| 5.1.12 MSP11 Nautical Chart Service / Operational User Needs | 16 | 16 |  |  |  |  | Commence ENAV16 |
| 5.1.13 MSP12 Nautical Publications Service / Operational User Needs | 16 | 16 |  |  |  |  | Commence ENAV16 |
| 5.1.14 MSP13 Ice Navigation Service / Operational User Needs | 16 | 17 |  |  |  |  | Commence ENAV16 |
| 5.1.15 MSP14 Meteorological Information Service / Operational User Needs | 16 | 17 |  |  |  |  | Commence ENAV16 |
| 5.1.16 MSP15 Real-Time Hydrographic and Environmental Information Services / Operational User Needs | 16 | 16 |  |  |  |  | Commence ENAV16 |
| 5.1.17 MSP16 Search and Rescue (SAR) Service / Operational User Needs | 16 | 17 |  |  |  |  | Commence ENAV16 |
| **WG5 PNT** |  |  |  |  |  |  |  |
| 3.1.1. eLoran Guideline | 15 | 17 |  |  |  |  |  |
| 3.1.2. PNT Product Specification | 15 | 17 |  |  |  |  |  |
| 3.1.3. PNT services & Systems | 16 | 18 |  |  |  |  |  |
| 3.1.4. High accuracy systems | 18 | 20 |  |  |  |  |  |
| 3.1.5. Use of SBAS | 17 | 19 |  |  |  |  |  |
| 3.1.7. PNT data processing | 18 | 20 |  |  |  |  |  |
| 3.1.8. PNT performance message | 18 | 20 |  |  |  |  |  |
| 3.1.9. R-121 update | 15 | 16 |  |  |  |  |  |
| 3.1.10. DGNSS Coverage prediction | 17 | 18 |  |  |  |  |  |
| 3.1.11. Updates on PNT developments | 15 | 21 |  |  |  |  |  |
| 3.1.12. RTCM/ITU liaison re M823 | 18 | 18 |  |  |  |  |  |
| 3.1.13. IMO Liaison | 15 | 21 |  |  |  |  |  |
| 3.1.14. WG5 Document maintenance | 15 | 21 |  |  |  |  |  |
| 3.1.15. Liaison with related bodies | 15 | 21 |  |  |  |  |  |

1. Action items

Action Items for the IALA Secretariat

1. The Secretariat is requested to forward Output paper ENAV15-3.3.1 to Council for approval by correspondence by 17th October 2014. 6
2. The Secretariat is requested to forward Output paper ENAV15-3.3.1 to ITU-WP5B on 17th October 2014. 6
3. The Secretariat is requested to forward Paper ENAV15-14.1.6, Working Groups Terms of Reference, to Council for approval. 10
4. The Secretariat is requested to forward output paper ENAV15.14.1.12 to the ARM Committee for consideration. 10
5. Following review by the ARM Committee the Secretary General is requested to send a letter, based on ENAV15-14.1.12, to IHO endorsing the proposal that each AtoN be given a Persistent Unique Identifier. Furthermore, it is requested that both IHO-SNPWG and IHO-HSSC be invited to consider the expansion of the PUI concept to include waterway headers. As an annex, a draft letter has been prepared. 11
6. The Secretariat is requested to forward the liaison note, ENAV15-14.1.7 to IALA Committees and the PAP. 11
7. The Secretariat is requested to add an agenda item in the WG1 report section for ENAV16 regarding clarifying the terminology used in IHO S-100 and the Common Marine Data Structure (CMDS). 11
8. The Secretariat is requested to add an item in the ENAV16 Programme for the week to facilitate plenary discussion of test beds. 13
9. The IALA Secretariat is requested to forward the liaison note ENAV15-14.1.3 to the e-Navigation.net webmaster in the Danish Maritime Authority. 13
10. The IALA Secretariat is requested to bring ENAV15-14.2.1 on the evaluation and analysis of testbed outcomes forward to ENAV16. 13
11. The IALA Secretariat is requested to forward ENAV15-14.1.4 identifying potential areas for IALA to contribute to the e-Navigation tasks to all Committees and PAP. 14
12. If the SIP is approved by IMO MSC in November 2014, the IALA Secretariat is requested to draw on the information provided in ENAV15-14.1.4 and prepare a submission for the approval of the IALA Council in December 2014 and further submission to IMO NCSR 2 with deadline of 2nd January 2015. 14
13. The IALA Secretariat is requested to forward ENAV15-14.2.2 on e-Navigation Discussion Forums to ENAV 16. 14
14. The IALA Secretariat is requested to forward A-126, ENAV15-14.1.9, and liaison note, ENAV15-14.1.10, to the ARM Committee for review. 15
15. The IALA Secretariat is requested to forward Recommendation A-126, ENAV15-14.1.9, to Council if the ARM Committee has no comment. 15
16. The IALA Secretariat is requested to forward the revised version of Recommendation A-126, ENAV15-14.1.9, to IEC TC80, in the event of approval by the IALA Council. 15
17. The Secretariat is requested to forward Paper 14.2.45 to ENAV16 16
18. The IALA Secretariat is requested to forward the liaison note on revision of Guideline 1081, ENAV15-14.1.11, to the ARM Committee. 16
19. The Secretariat is requested to forward Paper ENAV15-14.1.13, IALA position paper on the possibility for non-SOLAS vessels to access some e-Navigation services, to the PAP. 17
20. The IALA Secretariat is requested to forward working paper ENAV15-14.2.4 to ENAV16. 17
21. The IALA Secretariat is requested to forward working paper ENAV15-14.2.5 to ENAV16. 17
22. The IALA Secretariat is requested to forward working papers ENAV15-14.2.7 and ENAV15-14.2.41 to ENAV16. 18
23. The IALA Secretariat is requested to forward working paper ENAV15-14.2.3) to ENAV16. 18
24. The Academy is requested to submit a draft WWA model course on satellite navigation to ENAV16. 18
25. The IALA Secretariat is requested to forward Liaison Note (ENAV15-14.1.5) to the ARM Committee. 19
26. The IALA Secretariat is requested to include the working paper (ENAV15-14.2.40) as an input paper to the next meeting. 19
27. The IALA Secretariat is requested to forward working papers ENAV15-14.2.39 and ENAV15-14.2.to ENAV16. 19
28. The Secretariat is requested to forward the ENAV Committee work plan for 2014-2018 (ENAV15-14.1.2) to the Council for approval. 20
29. The Secretariat is requested to forward Paper e-NAV14-12.3.1 to ENAV16. 20
30. The Secretariat is requested to forward the report of ENAV14 (ENAV15-16.1) to the Council, to note. 21

***Action items for members***

1. [Committee Members are requested to provide ideas for ENAV rapporteur topics and to volunteer to act as Rapporteurs. 8](#_Toc401587409)
2. [Jan-Hendrik Oltmann and Michael Hoppe are requested to provide an article for the IALA Bulletin based on the ENAV15 input paper. 8](#_Toc401587410)
3. [Mahesh Alimchandani is requested to draft an article for the Bulletin requesting the membership to provide information on existing and planned test beds. 8](#_Toc401587411)
4. [The Chair of ENAV WG1 is requested to provide a draft information paper to clarify the terminology relating to Common Maritime Data Structure (CMDS) and S-100 for ENAV16. 11](#_Toc401587412)
5. [Jan Hendrik Oltmann is requested to co-ordinate intersessional work on the Draft Recommendation of the CSSA Generic Service Model by correspondence group. 12](#_Toc401587413)
6. [The Chairman is requested to provide guidance to the Committee and the Correspondence Group on distributing the content of the draft Recommendation E-140 between Recommendations and Guidelines. 12](#_Toc401587414)
7. [Ole Borup, Mikael Lind and Kwangil Lee were requested to submit an information paper to ENAV16. 12](#_Toc401587415)
8. [ENAV Committee members are requested to promote the e-Navigation.net website as a valuable repository for testbed information. 13](#_Toc401587416)
9. [ENAV Committee members are requested to encourage testbed project partners to report information on their testbeds, using the IALA reporting template, to the IALA Secretariat. 13](#_Toc401587417)
10. [Jin Hyoung Park, Michael Bergmann and Michael Siegel are requested to further develop the preliminary structure (ENAV 15-14.2.1) to address the evaluation and analysis of testbed outcomes. 13](#_Toc401587418)
11. [ENAV Members are requested to contribute intersessionally to the development of ENAV15-14.2.1 on evaluation and analysis of testbed outcomes. 13](#_Toc401587419)
12. [The Chair and Vice-Chair of the ENAV Committee are requested to consider reserving time during the working week for members and any testbed project managers present to discuss the results of their testbeds. 14](#_Toc401587420)
13. [Interested ENAV Committee members are requested to contact Steve Burrows regarding e-Navigation Testbed Discussion Forums. 14](#_Toc401587421)
14. [The WG3 Chair is requested to consider the programme for Task 2.1.1 with a view to commencing as early as possible. 15](#_Toc401587422)
15. [Committee Members are requested to submit input on the date for updating the Marine Radio Communications Plan, ENAV work task 2.1.1 to ENAV16. 15](#_Toc401587423)
16. [The Chair of WG3 is requested to liaise with the Chair of the IMO GMDSS WG (Bob Markel, RTCM) regarding coordination of common communication aspects of e-Navigation and GMDSS. 16](#_Toc401587424)
17. [ENAV Committee members are requested to review working paper ENAV15-14.2.3 prior to ENAV16 and to provide any comments to the WG5 Vice Chair. 18](#_Toc401587425)
18. [Working Group Chairs are requested to review and update the draft Workplan Task Register, ENAV15-14.2.51 and submit to ENAV16. 20](#_Toc401587426)
19. [Anders Brojde is requested to submit a proposal for a seminar on e-Navigation infrastructure for approval of Council. 20](#_Toc401587427)
20. [Omar Frits Eriksson is requested to invite Jon Leon Ervik to act as Rapporteur between the ENAV and VTS Committees. 20](#_Toc401587428)