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**Report of the 15th Session of the IALA EEP Committee**

**4 to 8 October 2010**

Executive Summary

* 45 members attended this meeting of the EEP Committee.
* The Committee considered 43 input papers.
* Work has commenced on the future use of audible signals; questionnaire being distributed.
* Increased use of elastic mooring and plastic buoys noted and cost implications being assessed.
* Significant information is becoming available on the means to prevent bird fouling.
* Practical information now emerging about the installation of AIS on AtoN.
* Data gathering begun on engineering aspects of AtoN in polar regions.
* AtoN training documentation progressed.
* Complementary use of lighthouses reviewed; questionnaire to be circulated.
* Intention to develop heritage web page to assist information exchange.
* Advice provided on safety when working at height.
* Need for product certification reviewed.
* Draft Guideline 1073 – Conspicuity of AtoN Lights at Night was progressed in both content and format, including input from Japan Coast Guard.
* Draft Guideline on Daymarks for Floating AtoN was modified and expanded in scope to apply to all AtoN.
* Guideline 1043 - on Light Sources Used in Visual Aids to Navigation was considered for expansion to include guidance on the degradation of light sources over time.
* Liaison note to ANM & e-NAV Committees on visible light communication technology.
* Changes to the Work Programme were proposed (Annex G)
* A detailed Work Programme was developed (Annex H).

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| **EEP Committee**  15th Session | 8 October 2010 |

**Report of the 15th Session of the IALA EEP Committee**

# General

The 15th meeting of the Engineering, Environment and Preservation of Historic Lighthouses (EEP) Committee was held from 4 to 8 October 2010 at IALA. The Chairman was Ómar Frits Eriksson. The Vice Chairman, Seamus Doyle, was unable to attend. The Secretary for the meeting was Mike Hadley.

The Chairman welcomed all participants to the meeting, saying that it was a pleasure to see so many faces and, in particular, those attending for the first time. He reminded the meeting that it was at the beginning of a 4 year programme, before introducing the Secretary-General.

The Secretary-General reiterated the welcome to the members before saying that he was no stranger to EEP, having started with the Committee at the same time as the Chairman. He had also been involved with ANM, before becoming an IALA Council member. He outlined the progress being made with the relocation of IALA to Bel-Air and explained some of the benefits that the Committee could expect from the move. He then said that EEP16 is likely to be the first meeting to meet in the new premises.

Looking to the future, the Secretary-General said that he expected EEP to continue to be a highly productive Committee, adding that the maritime community and IMO in particular, are placing increasing demands on IALA, demands which can only be met by the efforts of the Committee members.

He ended by congratulating the Chairman for his enthusiasm and drive.

After formally introducing himself, the Chairman requested individual committee members to introduce themselves. He then, briefly, ran through the plan for the week and the social programme.

## Administrative Announcements

Virginia Butler, PA to the Secretary General, provided information on health and safety and administrative matters at IALA headquarters.

Mike Hadley gave details on other administrative matters, giving details for accessing the ftp server and the wireless internet service.

The Chairman thanked the members of the Secretariat for the information provided.

The Chairman then listed those that had sent their apologies for not attending. They were:

|  |  |  |
| --- | --- | --- |
| Ron Blakeley | Trinity House | England |
| Carlos Calvo | Santander Port Authority | Spain |
| Knut Baar Christofferson | Norwegian Coastal Administration | Norway |
| Wayne Danzik | USCG | USA |
| Seamus Doyle | CIL | Ireland |
| Vincent Guigueno | Phare et Balise | France |
| Ove Ibsen | Oi Electric | Denmark |
| Jonas Lindberg | Sabik Oy | Finland |
| Chris Proctor | Sealite | Australia |
| PC To | Tideland Signal | USA |
| Jörg Unterderweide | Federal Waterways | Germany |

Noting that Jörg Unterderweide is unlikely to attend future meetings, the Chairman asked that the committee’s gratitude for all his hard work be passed to him.

## Approval of the Agenda

The agenda, at EEP15/1/1 rev5 was approved.

# Review of action items from EEP14

Input paper EEP15/2/1 rev1 refers. Action items for the IALA Secretariat from EEP14 were reviewed and noted as complete, with one exceptions:

**Action 25:** Following further review by the ad hoc expert group on conspicuity, EEP14/output/21 (Draft Guideline 1073 on the Conspicuity of AtoN Signal Lights at Night) had been considered in sufficiently structured to be sent to the Council and so had been withdrawn so that further work on it can be carried out.

The Chairman thanked the Secretariat and requested that all Action Items attributed to Committee members be dealt with in the Working Groups. However, it was noted that Actions 35 & 36 were complete.

# Review of input papers

EEP15/3/1 rev3 refers.

The Chairman carried out a brief introduction of all input papers and mentioned the working groups in which they would be dealt with.

# Reports from other bodies

Input papers EEP15/4/1 to EEP15/4/8 refer.

## IALA Council 46th Session (December 2009) report

EEP15/4/1 refers.

The meeting noted:

* The approval of the 2010 – 2014 Committee Structure and Rules of Procedure;
* Comments about Work programme tasks;
* The approval of submitted documents;
* The presentation about the IALA World-Wide Academy and the appointment of Jean-Charles Leclair as its Dean;
* The countries to host the 2014 and 2018 Conferences.

## IALA Council 47th Session (March 2010) report

EEP15/4/2 refers.

The meeting noted:

* The approval of the IALA Strategy paper;
* The holding of the Arctic Waters meeting;
* The report of the VAtoN workshop and the approval of the associated recommendation and Guideline.

## IALA Council 48th Session (March 2010) report

EEP15/4/3 refers.

The meeting noted the appointment of the new IALA President and Vice-President.

## IALA Council 49th Session (June 2010) report

EEP15/4/4 refers.

The meeting noted the:

* move of IALA to Bel-Air
* launch of IWRAP Mk2;
* submission approved for NAV56 on evaluation of degree of risk;
* amendment to Guideline 1066;
* IMC representation about Product Certification;
* proposed risk seminar in November 2010;
* intentions for an overall workshop / seminar programme.

## IALA Report on IMO MSC87 (May 2010) report

EEP15/4/5 refers.

Jean Charles Leclair, the IALA representative at IMO, introduced the report and highlighted the developments in relation to:

* AtoN in Arctic waters;
* AtoN fund;
* The move from voluntary to mandatory audit scheme by 2015, which would have some impact on existing IALA guidance.

## IMO NAV56 (July 2010) report

EEP15/4/6 refers.

It was noted that the following points had been drawn to the Committee’s attention:

* the new interim night signals implemented in the Singapore Strait for vessels crossing the TSS;
* the decision not to create safety zones larger than 500 metres around artificial islands, installations and structures in the EEZ;
* the discussion on new symbols for AIS AtoN and the request to discuss the use of AIS AtoN within IMO;
* the adoption of the SN circular as proposed by IALA on Degree of risks evaluation.

## 17th IALA Conference report

Specific attention was drawn to the Conference’s Conclusions and Recommendations (pages 82-84 of the report). Each was briefly reviewed and then Working groups were asked to consider whether anything reported needed to be reflected in the Committee’s Work Programme.

## PAP19 (October 2010) report

EEP14/4/8 refers.

The meeting noted the:

* request for volunteers to check the dictionary;
* need to draft a disclaimer for the dictionary (now approved by the LAP);
* report by the Chairman of EEP;
* potential for IWRAP Mk2 to in the efficacy of imposing a speed limit;
* comments about the World-Wide Academy;
* intention to offer model courses to the World Maritime University (WMU);
* the forwarding of the committee’s Work Programme to the IALA Council;
* rules for attendance at IALA meetings;
* request for a heritage web page;

# Reports from Rapporteurs

## Developments in Aids to Navigation (M1\*)

Adrian Wilkins said that dual band radar target enhancers (RTE), combining both X and S bands, are now available from ECHOMAX ([www.echomax.co.uk](http://www.echomax.co.uk)). They have antenna 685mm long, with 40.5 mm diameter and weight 573 gm. They are manufactured in the UK for use in yachts. A similar product is also available from ‘SeaMe’.

## Developments in Renewable Energy Sources (M2\*)

There was nothing to report.

## Developments in Battery Technology (M3\*)

David Jeffkins instanced the paper from Korea (EEP15/8/2) and agreed to provide a presentation on Saft batteries, taken from a recent AMSA sponsored AtoN seminar (May 2010). He was happy to provide additional information or to put members in touch with the speaker. The presentation is part of the output from the meeting.

Aivar Usk mentioned new IEC standards concerning the testing of lithium ion cells for vehicles. Other new IEC standards may have an impact on Guideline 1012 (For the protection of lighthouses and aids to navigation against damage from lightning). Specific details are at Annex J.

He was invited and agreed to raise the standards with Chairman of WG1.

## Developments in New Light Sources (M4\*)

EEP15/5/4 and EEP15/5/4a

Ian Tutt introduced his papers. He said that a 72 watt Citizen high wattage LED is anticipated. The Citizen range was confirmed as solely white in colour but the PhlatLight comes in various colours.

## IALA Certification Process (M5\*)

EEP15/10/1, EEP15/10/2 & EEP15/10/4.

It was confirmed that Zeni Lite Buoy Co. Ltd. have applied for product certification since the last meeting. With regard to the representation coming from the IMC, David Jeffkins said that the papers would be discussed within WG3. It was noted that although there is an action pending from the IMC the Committee could (and should) form its own view.

In discussion there was no strong support for the scheme but there was support for the retention of the product templates and WG3 were encouraged to consider retaining them if, after their deliberations, they were to recommend suspension of the Product Certification Scheme.

## CIE-IALA Liaison (M6\*)

EEP15/5/6 and EEP15/5/6a refer.

Ian Tutt introduced his papers, saying that they had been extracted from a draft report from a CIE Technical Committee document. The papers would be reviewed within WG4.

He added that here was no activity to report on from the CIE working group but that he anticipated being able to make a report at EEP16.

As Ian Tutt is approaching retirement, the question of his relief for this important activity was raised and discussed. Trinity House said that the matter is under active consideration.

# Presentations

The three presentations were made during the opening plenary session. All have been made available on the IALA ftp site.

## IALA World-Wide Academy Jean-Charles Leclair

Jean-Charles Leclair presented the background, purpose and aims of the WWA. He then presented the current work on AtoN training, which is in support of SOLAS chapter V, regulation 13. He indicated that the aim is to provide a family of documents (Recommendation, Guideline, Model Course), with as many model courses as are necessary. He indicated that a template model course is already available from the IALA website and requested any potential authors to contact him or IALA. He also sought material from members’ training establishments (in English) which could be used to advance the writing of model courses.

## Radioactive Lightning Rods Manuel Santos

Manuel Santos sketched out the history of lightning conductors and gave some details about the first radioactive lighning rods, including their half-life. He covered the problems caused by exposure of radioactive lightning rods to the weather and then spoke of more recent developments, their protection levels and relevant standards. He indicated that there are now two main types: meshes / air terminators and ionisation devices. The conclusions presented were;

* More electronic systems are being used in lighthouses and they are becoming more sophisticated;
* It is very important to protect these systems against lightning;
* The radioactive lightning rods which were used until the eighties no longer meet the current standards to protect our equipment and are a potential hazard that needs to be eliminated;
* After being removed, they are considered radioactive waste and so should be treated as such.

The presentation ended with rules for handling such devices.

In response to a query it was confirmed the radioactive material is around the tip of the device. In further discussion, it was also stated that it has been predicted that 1ºC of atmospheric warming will raise the probablility of lightinging occurring by 20%.

## Proposal for voluntary product information exchange standard Aivar Usk

The full title of Aivar Usk’s presentation was Proposal for voluntary product information exchange standard, ‘Standard Format for Communicating Technical Parameters of AtoN Products in Electronic Form.’ The presentation showed why Cybernetica AS had embarked on the project and the reasons why standardization was considered desirable. An example excerpt was shown and the presentation ended with the question ‘If this is considered useful, should an EEP working group be formed to further examine the concept, probably in conjunction with ANM?’

It was observed that what had been shown might be a way of using the information from product templates. It was then remarked that the potential application might go beyond product templates and WG3 were invited to consider Aivar Usk’s proposal.

It was noted that there may be a need to consider any further development in the light of the IALA UMDM and how it too might develop.

The Chairman thanked the presenters and remarked that he had never heard of radioactive lighning protection but would be investigating it further, after the meeting.

# Establish Working Groups

The Chairman proposed that four Working Groups (WG) be established, as outlined below:

|  |  |
| --- | --- |
| Working Group | Working Group Chair |
| WG1 – Aids to navigation design and maintenance | Adrian Wilkins |
| WG2 – Heritage and civil engineering | Bob McIntosh |
| WG3 – Environment, quality assurance and publications | David Jeffkins\* |
| WG4 – Light and vision | Peter Kelly\*\* |

\* Standing in for Wayne Danzik

\*\* Standing in for Seamus Doyle

It was agreed that WGs 1 and 2 would meet on Tuesday, WGs 3 & 4 on Wednesday and that the first two sessions on Thursday would be available to all WG to finalise their work.

The papers for each working group were reviewed, being introduced where possible by their authors.

WG2. Committee members with any additional information about floating aids to navigation were urged to contact Adrian Wilkins or Bob McIntosh during the meeting, in order to further develop the planned ‘History of floating aids’ booklet.

WG3. With regard to the enquiry from Marine Safety Queensland (MSQ) about safe practice - working at heights, it was noted that MSQ were seeking any advice that the Committee may have and that responses could be channelled via David Jeffkins.

It was observed that EEP15/10/5 is being intentionally held back from submission to Council until more work has been done on the model courses that are seen as an essential support to it.

WG4. Work will be progressed on the two draft Guidelines (Daymarks – EEP15/11/1 and Conspicuity – EEP15/11/2); the latter has all the required information but needs ‘reshaping’ and is expected to be completed at EEP16. The two Japanese papers (EEP15/11/4 and EEP15/11/5) will be reviewed with material from EEP15/11/4 expected to be incorporated into the draft Guideline on Conspicuity.

# Working Group 1 – Aids to Navigation Design & Maintenance

Working Group 1 was asked to respond to input papers EEP15/8/1, EEP15/8/2 & EEP15/8/4 (renumbered from EEP15/11/3) and the relevant reports from rapporteurs.

Since this meeting marked the start of the new IALA four-year working programme, a review of the objectives for the Working Group was made.

## ****AtoN Engineering**** (Task 2\*)

### Availability of a system of AtoN, including synchronised or sequenced lights in a channel

The WG noted Guideline 1069 and also the problem of how to deal with consideration of the availability of a set of synchronised lights, if one or more lights should fail or lose synchronisation.

It was suggested that possibly the synchronisation itself could be considered as an ‘AtoN’ and be given an IALA Category. This might assist in assigning a level of urgency to restoration of synchronisation. After discussion, the WG decided to refer the matter to ANM Committee for advice (EEP15/output/2).

Action Item

The Secretariat is requested to forward the Liaison Note seeking ANM guidance on how to handle this general question of failure of synchronisation/sequencing or the failure of individual lights within a group of synchronised/sequenced lights in a channel (EEP15/output/2).

### Elastic moorings and plastic buoys

Sipke Hoekstra advised that he would submit an input paper, on the economic merits of the conversion programme to ‘all plastic’ buoys in Netherlands to EEP16.

Action item

Sipke Hoekstra and Nicolas Auger were requested to continue their work on the economic and practical factors related to synthetic moorings and plastic buoys, and to submit one or two input paper(s) on these topics to EEP16.

Nicolas Auger reminded the meeting of the change to plastic buoys in France, but noted that in France this conversion to plastic buoys involved a change in buoy tenders as well.

Fong To Leung from Hong Kong mentioned a trial of a plastic buoy, and a decision to revert to steel buoys, because of damage to the plastic buoy from vessel impact, and other factors.

The WG determined that it would be opportune to update the existing IALA guidance on plastic buoys and on synthetic moorings, especially Guidelines 1047, 1006, and 1066, taking account of:

* Economic benefits, including the consideration of buoy tenders;
* Special problems in regions of high temperature;
* Experience of members since the FLOATAID meeting at Brest in 2008.

The WG prepared a draft questionnaire (EEP15/WG1/WP2) and asked members using plastic buoys to complete this document and submit it to the Committee before EEP16.

Action Items

Committee members were requested to complete the questionnaire on plastic buoys and synthetic mooring (EEP15/WG1/WP2) and submit it in advance of EEP16.

The Secretariat is requested to forward EEP15/WG1/WP2 to EEP members.

### Bird fouling of AtoN structures and means to minimise this problem

The WG noted input paper EEP15/8/4 from Japan Coast Guard and EEP15/8/1 from Sweden on this matter, and also earlier discussions on the topic in the Committee and at the last IALALITE/IALABATT workshop. The WG concluded that a new IALA Guideline on the measures to mitigate the effect of bird fouling on AtoN would be desirable. Guidance on this topic is presently limited, and is dispersed among a number of existing IALA documents.

WG1 will continue its work to assemble material and to create a draft Guideline on this topic. An early draft guideline is at EEP15/WG1/WP6.

Action Items

Committee members are requested to forward practical information on the measures they use to combat the bird fouling problem before EEP16 and to submit comments on the early draft guideline (EEP15/WG1/WP6).

The Secretariat is requested to forward EEP15/WG1/WP6 & EEP15/WG1/WP7 to EEP16.

### Lightning Protection

The WG noted the presentation by Portugal on the problems of removal and disposal of lightning protection containing radioactive material. A revision of the existing Guideline 1012 was drafted by the WG, based on the Portuguese information.

The WG noted the existence of IEC standards on lightning protection IEC 62305-Parts 1 to 5, 62561-4, and recognised that a review of these IEC standards was desirable by IALA. The WG recognised that further revision of Guideline 1012 may be required.

Action Items

Arlindo Santos, Manuel Santos and Paulo Rego are requested to revise the Portuguese part of EEP15/WG1/WP5 and submit a new input paper for EEP16.

Committee members are requested to comment on the proposed changes to Guideline 1012 (EEP15/WG1/WP5) before EEP16.

The Secretariat is requested to forward the revised EEP15/WG1/WP5 to EEP16.

### Practical aspects of installing AIS AtoN on buoys and beacons

The WG concluded that there was a need for practical guidance on the installation of AIS AtoN, especially on floating aids, to assist IALA members to choose the most suitable mechanical and electrical design, and to avoid problems with unsuitable installation details.

The WG concluded that a new Guideline on the practical installation of AIS on floating aids and at shore stations was required. The WG believed that such a Guideline more correctly fell within the expertise of EEP.

Action Item

Committee members are requested to submit information on their experience and practices with the practical installation of AIS AtoN systems to EEP16.

## ****Power Systems and Energy Storage**** (Task 4\*)

The WG acknowledged the input paper from Korea, EEP15/8/2, and determined that updating may be required of the existing IALA guidance on battery technology and use. Minor changes to Guideline 1067-3 were drafted (EEP15/WG1/WP1).

Action Items

The Secretariat is requested to forward EEP15/WG1/WP1 to EEP16.

Committee members were requested to comment on the proposed changes to Guideline 1067-3. EEP15/WG1WP1

Committee members were requested to provide information to EEP16 on the use of LiFePO4 batteries in AtoN applications.

## ****Remote Control and Monitoring**** (Task 5\*)

The WG noted the increasing importance of AIS in the monitoring of AtoN and acknowledged that the technology of monitoring via AIS is covered by existing IALA documents, including A-126. The WG considered that some guidance on the practical application of monitoring by AIS may be useful to IALA members, and that Committee members have practical experience in this area that should be of value if it could be summarised. However the WG felt that this information would be better added to existing IALA documents, and prepared a Liaison Note to the e-NAV Committee to request it to copy its draft revision of A-126 to EEP for comment.

Action Items

The Secretariat is requested to forward the Liaison Note from EEP on IALA guidance on the technical aspects of AIS (EEP15/output/3) to the e-NAV Committee.

The Secretariat is requested to forward the Liaison Note from EEP on IALA guidance on the technical aspects of AIS (EEP15/output/3) to Rolf Zetterberg by e-mail.

The WG also noted that there is guidance on the deployment of AIS AtoN from the navigational viewpoint in IALA Guideline 1062 on the establishment of AIS as an AtoN.

Harmonisation of monitoring messages in AIS was discussed at length and the WG noted the work by the e-NAV Committee to encourage use of existing binary messages rather than the creation of new ones.

Action item

Committee members are requested to provide input to EEP16 on problems encountered and their solutions in implementing monitoring by AIS, so that it can be collated and forwarded to the e-NAV Committee.

## The use of Audible Signals as aids to navigation (*in conjunction with ANM*) (Task 15\*)

The Committee noted that the ANM Committee is considering the use of AtoN sound signals. It was noted that some of the new wind energy installations offshore in Europe included sound signals in the AtoN mix.

Nicolas Auger reported that in France, the fog signal has become the highest power drain at sites where sound signals are still used. He also said that discontinuing of sound signals sometimes encountered opposition from local heritage groups.

The WG noted that the existing IALA guidance on sound signals may need to be improved but deferred work on this topic until advice can be received from the ANM Committee on the navigational needs for such signals. There was also a discussion of the ease or difficulty of obtaining service and spare parts for electric sound signals.

Action Items

The Secretariat is requested to forward the Liaison Note on audible signals, concerning the future navigational requirements for audible signals, (EEP15/output/4) to the ANM Committee.

Committee members are requested to provide input to EEP16 on the current use of sound signals and the policies for the future use of such signals. Information on number, frequency, range, and recent servicing experience and problems would be valuable.

## ****Risk Assessment Techniques in AtoN Design and maintenance**** (Task 11\*)

No action was progressed on this topic, although WG members agreed that it was becoming important.

Action item

Nicholas Auger is requested to provide the French presentation on risk assessment techniques as an input to EEP16.

## ****Polar Engineering**** (Task 14\*)

The WG commenced work on summarising the parameters for consideration and setting a basic framework for the work of the Committee in this area (EEP15/WG1/WP4).

Action Items

The Secretariat is requested to forward EEP15/WG1/WP4 to EEP16.

Committee members are requested to submit input on polar engineering before EEP16.

Paulo Mauricio Rego is requested to provide information on Brazilian experience in installing fixed structures in the Antarctic.

# Working Group 2 – Heritage, Conservation & Civil Engineering

Working Group 2 was asked to respond to input papers EEP15/9/1 rev1, EEP15/9/2, EEP15/9/3, EEP15/9/4, EEP15/9/5, EEP15/9/6 & EEP15/9/7.

The Chairman welcomed all attendees to the working group and in particular a warm welcome was extended Dr Ionnani Papayanni of Thessaloniki University and her staff who had been invited to the meeting as observers.

## ****Heritage and Conservation**** (Task 9\*)

### Maintain the IALA Lighthouse Conservation Manual

The working group spent some time discussing whether a revised version of the Manual was required and the discussions covered what use was being made of the manual, how easily available it is to members and others and what should be included in a revised manual. The existing Revision 1 of the manual although published in 2006 included chapters made up of guidelines from up to 6 years previously. It was felt that a simple revision of the existing manual was not a priority but to include the new guidelines from last session and those anticipated from this session would make it a more worthwhile document. Some representatives felt that a printed copy was still a good idea but it was also felt that a digital copy readily available on the website would improve access to the document for both members and other relevant bodies. It has been suggested that questions should be added to our questionnaire to determine the level of use of the manual by members.

Additional items which it was still felt could be covered or amended within the manual were adjustments to the case study evaluation form to make it more user friendly, to provide answers to the most commonly asked questions and examples of damage caused by repairs where the repairs resulted in increased damage to the rest of the building.

Action item

WG2 members are requested to consider all aspects of the IALA Lighthouse Conservation Manual, as discussed, and submit proposals for ways in which a revised version could be improved.

### Produce new guideline on selection and display of historic artefacts

David Jeffkins submitted a paper from AMSA (EEP15/WG2/WP5) on the subject which it was agreed by the WG has provided very good and useful additional information. In addition input paper EEP15/9/2 from N Jones of Trinity House was accepted for inclusion in the document. Input paper EEP15/9/1rev1 is the previous version of the Guideline. Unfortunately time did not permit a thorough examination of the three documents together and David Jeffkins has agreed to take the documents and combine them into the Guideline (EEP15/WG2/WP3) and produce a draft for circulation and comment prior to EEP16. WG2 members were requested to return comments on the draft to David Jeffkins, to allow a further draft to be submitted as an input paper to EEP16.

Action items

David Jeffkins is requested to combine EE15/WG2/WP3, EEP15/WG2/WP4 and AMSA document (EEP15/WG2/WP5) to provide further draft of Guideline on Selection and Display of Historic Artefacts and circulate to WG2 members for comment.

WG2 members are requested to comment on draft of Guideline on Selection and Display of Historic Artefacts and return comments David Jeffkins prior to EEP16.

David Jeffkins is requested to incorporate responses from WG2 members and submit revised draft of Guideline on Selection and Display of Historic Artefacts as input to EEP16.

The Secretariat is requested to forward EEP15/WG2/WP3, EEP15/WG2/WP4 & *EEP15/WG2/WP5* to EEP16.

### Produce new guideline on transfer of redundant lighthouses

This is a new topic to the working group put forward by members of the committee at the end of last session. It is clear that this is a matter which is becoming more regularly part of the working group discussions, with many members reassessing the need for some of their AtoN or even reducing the area required within a lighthouse site. It has always been the agreed preferred policy within the working group that retaining ownership of the whole site allows greater control of development within the site. However when the situation arises then the disposal of a completely redundant AtoN site is the inevitable result. The working group considered that it was very important that any disposal should maintain safeguards on the heritage value of the lighthouse site as a whole. The guidance will also include information on site remediation such as removal of hazardous materials, for example mercury or diesel spillages. It was suggested that during the current economic climate, transfer to councils or other local bodies was more difficult. Christian Lagerwall has been requested to prepare a paper for circulation to working group members to provide an outline for the contents of this guideline intersessionally and working group members are to respond to him with comment and information relating to this matter to allow a revised input paper to be submitted to EEP16.

Action Items

Christian Lagerwall is requested to prepare a paper to provide an outline for the contents of the Guideline on the transfer of redundant lighthouses and circulate it to WG2 members for comment.

WG2 members are requested to respond to the paper on the guideline on transfer of redundant lighthouses to Christian Lagerwall prior to EEP16.

Christian Lagerwall is requested to include comments from members and submit a revised paper to provide an outline for the contents of the guideline on transfer of redundant lighthouses to EEP16.

### Report on Case Studies

Unfortunately further development of the Case Study reports for group visits to the projects at Nakkehoved Lighthouse near Copenhagen and Cabo Mayor Lighthouse, Santander has not yet taken place. Bob McIntosh is again requested to complete draft case study reports for these two visits and circulate to the working group and others who were included in the visits or the project for comment and additional information. Revised reports will then be submitted to EEP 16 for further comment and publishing on IALA Website Heritage page.

Action Items

Bob McIntosh is requested to complete draft case study reports on Nakkehoved and Cabo Mayor Lighthouses and circulate these reports to Working Group 2 members for comment.

WG2 members are requested to respond to the draft case study reports on Nakkehoved and Cabo Mayor Lighthouses to Bob McIntosh prior to EEP16.

Bob McIntosh is requested to include the comments from members and submit revised draft case study reports on Nakkehoved and Cabo Mayor Lighthouses to EEP16.

### Document History of Floating Aids to Navigation

Adrian Wilkins has developed his presentation at the Heritage Seminar in Santander in June 2009 into a record of the History of Floating Aids to Navigation and a copy of the document is included in the working papers as EEP15/WG2/WP1. Committee Members are requested to provide Adrian Wilkins or Bob McIntosh with any information or sources of information on the History of Floating Aids to Navigation before EEP 16 to allow him to improve the coverage of the information.

During the meeting, Carmen Martinez provided details of the location of the document requested by Adrian Wilkins and other articles on the history of the buoyage system on the Guadalquivar river.

Adrian Wilkins was requested to include any additional information received and to include a list of references in the document as an input paper to EEP16. It is intended that this document will then be published on the Heritage page of the IALA Website after EEP16 with a request for further information and that the published version will be updated as time permits.

Action Items

Committee Members are encouraged to read Adrian Wilkins paper on The History of Floating AtoN (EEP15/WG2/WP1) and are requested to provide Adrian Wilkins or Bob McIntosh with any information or sources of information on the History of Floating Aids to Navigation before EEP16.

Adrian Wilkins is requested to include any additional information received in The History of Floating AtoN (EEP15/WG2/WP1) and to include a list of references in the document and to submit it as an input paper to EEP16.

The Secretariat is requested to forward EEP15/WG2/WP1 to EEP16.

### Re-Issue Questionnaire on Complementary Uses of Historic Lighthouses

It had been agreed at the end of the previous session that although the results of the questionnaire on Complimentary Uses of Historic Lighthouses were useful and provided some useful information, particularly in relation to projects in various countries, it was felt that the 25% response was insufficient to make too many specific conclusions as to the scope of complementary uses in place at members lighthouses. A great deal of discussion took place on the definition of a historic lighthouse but it was agreed that the existing definition continued to be satisfactory. Jo van der Eynden submitted a document with his thoughts on possible alternative questions and provoked further discussion on what should be covered in the questionnaire. Care must be taken to ensure that only one question is asked within each question or this can make completing the questionnaire difficult for members. It was agreed that some questions should be included to determine the extent of distribution of the IALA Lighthouse Conservation Manual and of its use by members. In addition it was felt it would be very useful from a building maintenance perspective to determine what problems members encounter with the their historic lighthouse buildings as this might give an indication of areas where solutions may be sought or exchanged and may indicate that there is a small number of common problems or a large number of different problems. It may not be possible to include this at this stage as it may divert the focus of the questionnaire away from its original aim. WG2 members are requested to review the paper submitted by Jo van der Eynden (EEP15/WG2/WP2) and to send comments to him before EEP16. Jo van der Eynden is requested to include the suggestions from EEP15 and received from Working Group 2 members and to submit a revised list of questions to be included in the questionnaire as an input paper to EEP16.

There was additional discussion on the possibility of issuing the questionnaire on line and Bob McIntosh is requested to investigate the most suitable approach for the issue of the questionnaire the IALA Secretariat.

Action Items

The Secretariat is requested to forward EEP15/WG2/WP2 to EEP16.

WG2 members are requested to review EEP15/WG2/WP2 Questionnaire on Complementary Uses and to send comments to Jo van der Eynden before EEP16.

Jo van der Eynden is requested to include the suggestions from EEP15 and those received from WG2 members and to submit a revised list of questions to be included in the questionnaire as an input paper to EEP16.

Bob McIntosh is requested to discuss the options for the issue of the Questionnaire on Complementary Uses of Historic Lighthouses with the IALA Secretariat and report back to EEP16.

### Promote an international network for historic lighthouses

This is considered to be one of the most important work items within the heritage area of work with the hope that the working group will be able to provide a platform for the exchange of information between IALA members, Heritage Groups and others responsible for the upkeep of historic lighthouses around the world. The holding of an International IALA Seminar which although principally held for the benefit of members does attract interest from outside bodies and many representatives from related organisations have been encouraged to participate and make presentations at our events in Kristiansand in 2000, Gothenburg in 2005 and Santander in 2009. Details of proposals for 2013 will be developed under work item 9.1.8.

It is anticipated that the working group will shortly have a page on the IALA Website to make all our documents available more widely to the membership and it is hoped to a wider audience. Through this we are going to encourage the exchange of information on all matters relating to the Heritage of our Historic Lighthouses.

The IALA Bulletin editor requested that the WG chairman produce an article for the bulletin on a regular basis and we have called it ‘The Lighthouse Preservation Corner’ The first article was published in Bulletin 2010/1 concerning the history of the work group and plans for future work, the second article has just been published in Bulletin 2010/3 on the Heritage session at the IALA Conference in Cape Town and the third article due to be published in three months’ time will give a committee update along with an article on the renovation of a small Stevenson Lighthouse at North Queensferry, Scotland. It is now hoped that other members of the working group will offer articles to allow “The Lighthouse Preservation Corner” to continue on a regular basis.

Paul Ridgway has volunteered that he is prepared to write something on preserved lighthouse tenders and light vessels. If EEP Committee members have any information on their lighthouse tenders or light vessels he would be interested to include this in his articles. It has been suggested that may be developed in a similar way as Adrian Wilkins booklet on the History of Floating Aids to Navigation for future inclusion on our website page.

In addition Bob McIntosh will continue to circulate information relating to the Heritage and Conservation of Historic Lighthouses amongst those who have registered an interest and will include any new members or others who indicate that they wish to be updated on these matters.

Action Items

Bob McIntosh is requested to discuss the set-up of the Heritage page on the IALA Website with the IALA Secretariat and details of what, how and when information will be included.

WG2 members are requested to consider topics for future articles to be included in the IALA Bulletin within “The Lighthouse Preservation Corner” and to provide these to Bob McIntosh.

Bob McIntosh to meet editorial deadlines to ensure that articles are available for each bulletin wherever possible by passing suitable articles to the editor for inclusion in “The Lighthouse Preservation Corner”.

Bob McIntosh is to confirm to Paul Ridgway that WG2 will support his articles on preserved lighthouse tenders and light vessels and assist in editorial work if required.

Committee members are requested to submit any information they or their authorities have on preserved lighthouse tenders and light vessels to Bob McIntosh or Paul Ridgway.

Bob McIntosh is requested to continue to monitor the list of people who indicated an interest in Heritage and Conservation of Historic Lighthouses, to ensure that they are updated on developments.

### Seminar on Maintaining Historic Lighthouses

The need to hold a further seminar on Historic Lighthouses was discussed during the meeting and it was strongly felt that exchange of information and the networking which took place during the seminars was an extremely important contribution to the achievement of the aims of the working group. It was suggested that the topic of Maintaining Historic Lighthouses would provide scope for additional information to be provided without necessarily excluding other items to give a greater breadth. There are many work items which could be assisted by this information such as building conditioning and engineering before and after natural disasters. Information gathered from a questionnaire regarding common problems in building maintenance could assist in the discussion of possible presentation subjects at the seminar.

Various options on a possible host and location for the seminar were discussed and working group members will investigate the possibilities and report back at EEP16. It is anticipated that the preferred date for the seminar should be late May or early June 2013.

Action Item

WG2 members are requested to investigate a suitable host and location for a possible IALA Seminar on Maintaining Historic Lighthouses to be held around June 2013.

### Presentation by Prof. I Papayianni of Thessaloniki University.

Prof. Papayianni was invited by WG2 to attend our meeting and made a presentation titled ‘Engineering aspects concerning conservation of Historic Lighthouses’. This presentation covered the research carried out by her department in conjunction with the Hellenic Navy at several of their lighthouses. Prof. Papayianni suggested that not only was the heritage value of the site extremely important but also that the value of the areas landscape surrounding should be valued. One of the main problems which they encountered was the problems caused by older repairs where the use of cement had a greater effect on the existing structure. Also one of the case studies was at Paphos lighthouse on Cyprus where significant cracking on the tower was initially accounted for as a result of earthquake damage but the research carried out suggested that the effects of thermal movement were also significant.

The Chairman thanked Prof. Papayianni for her presentation, a copy of which is included in the EEP15 output documents, and also to her and her colleagues for their contributions to the days discussions.

## ****Civil Engineering and Structures**** (Task 10\*)

### Produce guideline on anti-fouling techniques (marine growth) for floating aids, boat landings, etc.

Some discussion took place within the working group as to whether this was a suitable location for this work item as it seemed to be more related to Floating Aids. No further discussion on the content took place before item was confirmed in this work group.

Action Item

Committee Chairman and members are requested to confirm the appropriate working group for work item 9.2.1 (Produce guideline on anti-fouling techniques (marine growth) for floating aids, boat landings, etc.).

### Expand Guideline on Building maintenance and conditioning in low energy environments and guidance on low power ventilation systems and avoiding condensation.

Although no specific discussion took place on the current guideline, some of the discussions were relevant for possible inclusion. These included the provision of a maintenance plan to conserve the buildings and taking account of the old methods, but also the benefits of new technology. There is a need however to ensure that using new techniques does not adversely impact on the existing structure such as the use of harder cement mortars in place of weaker, more porous lime mortars.

In order to expand this guideline EEP Committee members are requested to provide information on this type of problem in their authorities or to provide WG2 with a contact within their organisation who may be able to provide this type of information.

Ron Blakeley of Trinity House is requested to consider submitting an input paper for EEP16 on possible future areas of research and discussion relating to this topic which will allow the guideline to be expanded.

Action Items

Ron Blakeley is requested to submit an input paper for EEP16 on expanding the Guideline on building maintenance and conditioning in low energy environments on possible future areas of research and discussion.

Committee members are requested to provide information on building maintenance and conditioning in low energy environments within their authorities or to provide contact details for an individual who may be able to provide this information to Bob McIntosh.

### Provide guidance on protection and repair of Aid to Navigation Structures in Natural Disaster Areas

No time was available to discuss this matter specifically but it will be considered under the on-going work on the preparation of the Heritage (and Civil Engineering) page of the IALA Website and for inclusion within the scope of the Heritage seminar.

### Revise Lighthouse Maintenance Guidance

As a first step on this work Bob McIntosh has been asked to consider the scope of the existing guidance and how best it can be updated. On a previous work item by WG1 it was agreed that the US Parks guide on lighthouse maintenance covered a lot of ground on this topic and as it was freely available it was unnecessary to repeat this information. The possible use of links to documents such as this through the Heritage (and Civil Engineering) page of the IALA Website will also be investigated.

Action Item

Bob McIntosh is requested to consider the scope of existing Lighthouse Maintenance Guidance and to submit an input paper to EEP 16 on the way forward for a future guideline.

# Working Group 3 – Environment, Quality Assurance & Publications

WG3 was asked to respond to input papers EEP15/10/1, EEP15/10/2 EEP15/10/3, EEP15/10/4 & EEP15/10/5.

The detailed work programme for the next work period for WG3 was reviewed and additional detail added on the specific tasks for the creation of new guidance documents and revision of existing documents – refer Annex H.

## ****Environment and safety**** (Task 6\*)

A request for information in relation to working at heights and safe access to offshore aid to navigation structures from Maritime Safety Queensland (MSQ), Australia was reviewed.

MSQ are currently reviewing their safe work plans/procedures and risk assessments for working at heights and are seeking information from EEP members on their approach to dealing with this OH&S issue. MSQ will share their revised documents and procedures with the EEP committee following the review and update of their documentation.

Richard Moore provided David Jeffkins with information on the Canadian Coast Guard fall protection program. These documents were also provided in French and will be provided as part of the meeting output.

The WG noted that different countries may have specific requirements for compliance with their local legislation and the solutions offered in one country may not be fully compliant with legislation in others.

Ron Blakeley is requested to provide advice and information on the Trinity House experience in treating legionella and coli bacteria in water supplies of destaffed AtoN stations.

Adam Hay volunteered to develop an outline for a new Guideline on the Development of Safety Management Plan for AtoN Activities and submit to EEP 16.

Errol Joppich volunteered to review the NAVGUIDE content on the safe handling and management of mercury and submit any improvements to EEP16.

The WG noted information from the Carbon Trust on carbon saving (EEP15/WG3/WP1).

Action Items

The Secretariat is requested to forward EEP15/WG3/WP1 (Carbon saving) to EEP16.

David Jeffkins is requested to provide the Canadian Coast Guard fall protection program information to MSQ.

Ron Blakeley is requested to provide advice and information on the Trinity House experience in treating legionella and coli bacteria in water supplies of destaffed AtoN stations.

Adam Hay is requested to develop an outline for a new Guideline on the Development of Safety Management Plan for AtoN Activities and submit to EEP16.

Errol Joppich is requested to review the NAVGUIDE content on the safe handling and management of mercury and submit any improvements to EEP16.

## ****Product Certification**** (Task 8\*)

The WG discussed Input received from an IMC member and the IMC Assembly suggesting the Product Certification Program be discontinued. At the last meeting of the IMC Assembly there was agreement that a letter would be prepared and sent to IALA’s Secretary General addressing the concerns raised at the assembly meeting on the benefits of continuing the Product Certification Program. A copy of the letter was also to be sent to all Industrial Members at the time it was sent to IALA.

While this formal letter has not been received by the IALA Secretary General the WG felt that there was benefit in discussing this proposal and providing a view on it.

The WG felt that there are on-going benefits for members in having access to the Product Certification Templates for the purpose of procuring and comparing manufacturer’s products. If the IALA Council agrees to discontinue the Product Certification Program in the future the WG recommends that the product certification templates be continued to be maintained and updated by the EEP committee. The product certification templates should be linked to a revised IALA guideline to give them official status when called for in equipment tender specifications.

Aivar Usk further discussed a proposal that he presented in plenary with the WG on developing a standard electronic product data exchange schema – a copy of Aivar Usk’s presentation to plenary is provided as part of the meeting output. This proposed schema would be used by manufacturers to send product quality data to purchasers of their products. This would ensure that all product data received by purchasers would be in a standard format that could be easily imported into their maintenance management systems. The WG felt that there was scope for this schema to be based on the existing product certification templates and requested Aivar Usk to prepare a paper for input to EEP16 to further discuss his proposal.

The WG reviewed the existing IALA website for Industrial Members and their products. Some members of the working group were not aware that this page was available and that the link to the IMC page could be more prominently displayed on the IALA website to make it easier for members to access this information.

At EEP14 the Industrial Members Committee were asked if they would support the development of a searchable product database. This would allow manufacturers to present their products in a more consistent and effective manner. The IMC were also asked for their views on any improvements that might be desirable with respect to the existing Internet presence for the IMC on the IALA web site. A response from the IMC indicated that they were interested in a searchable product database – a copy of the IMC response will be included as input to EEP16.

The WG requests the IALA Secretariat to create a new link on the IALA website called AtoN Products and Services and link the current industrial members page to this link.

Action Items

Aivar Usk is requested to submit a paper to EEP16 further discussing his proposed product data standard.

The Secretariat is requested to create a new link on the IALA website called AtoN Products and Services and link the current industrial members page to this link.

The Secretariat is requested to forward the response from the IMC (EEP15/WG3/WP4) in relation EEP14/output/19 (Liaison note to the Industrial Members Committee soliciting their comments with respect to a searchable product database) to EEP16.

## ****Quality Management**** (Task 12\*)

The WG group reviewed the detailed work program for this task and identified guidance documents for review during the next work period.

## ****Aids to Navigation Training, IALA WWA**** (Task 7\*)

Jean-Charles Leclair presented a summary of the situation on the development of the IALA WWA and on the training activities, as it stands. He explained the aim of the draft Guideline for the accreditation of level 1 AtoN training courses, recalling that the aim and the scheme of the accreditation process is similar for the one adopted for VTS training. It is based on an initial audit followed by a quality system process.

After discussion, it was agreed by the WG that it would be premature to propose the approval of the draft Guideline for Accreditation of Level 1 Training to the Committee then the Council. It should be done when the Committee and the WG have a better idea on the detailed syllabus for level 1, general training for AtoN management. In the meantime, the WG and Committee Members are invited to revise the draft text and prepare comment for EEP16.

Regarding model courses, Jean-Charles explained that he has started to prepare the level 1 model course on management. This entails considerable work but he will do his best to progress it as fast as possible. He also insisted on the necessity to progress the drafting of the series of model courses for level 2 and congratulated Nicolas Auger for having prepared a model course on AtoN moorings. This model course should be an input document for EEP16 and all WG members are invited to comment. He expressed the view that efforts are requested to draft as many model courses as possible. It was agreed that the time spent on the drafting of each model course should not be very long as a large part of the model course is just a repetition of the example model course on maintenance of batteries. A significant part of the course document deals with the organization and running of courses. The specific material mainly concerns the references to be introduced and the detailed syllabus, including a timetable.

WG members were requested to co-ordinate the development of model courses with Jean-Charles Leclair to ensure that the tasks were not being duplicated.

Action Items

WG members are requested to review the draft guideline on Accreditation of Level 1 AtoN Training (EEP15/WG3/WP2) and provide input to EEP16.

WG members are requested to develop additional Level 2 technician Model Courses as input to EEP16.

WG members are requested to co-ordinate the development of additional Model Courses with Jean-Charles Leclair ([jean.leclair@wanadoo.fr](mailto:jean.leclair@wanadoo.fr)) to ensure that the same task is not duplicated.

The Secretariat is requested to forward EEP15/WG3/WP2 (Draft Guideline for the accreditation of AtoN training) to EEP16.

The Secretariat is requested to forward EEP15/WG3/WP3 (Model course – AtoN moorings) to EEP16.

# Working Group 4 – Light & Vision

WG4 was asked to respond to Input Papers EEP15/11/1, EEP15/11/2, EEP15/11/4 & EEP15/11/5.

It was noted that EEP15/11/3 had been re-numbered EP15/8/4 and re-allocated to WG1.

The Work Programme was reviewed and it was noted that Task 2 Engineering Visual Aids has been moved to WG1 leaving Task 3 Visual Perception of Lights and Daymarks as the only task allocated to WG4. This was considered to possibly leave an imbalance of work loading between the two groups.

Ian Tutt provided a presentation on a light range calculation programme that amongst other issues addressed the probability of detection of a light in the atmospheric weather conditions that specifically pertain to a given location. This programme is proposed to be provided as an Input Document to EEP16 and ANM15 with the aim, amongst other issues, of prompting an IALA discussion on the appropriate probability of detection levels to use in different design scenarios.

Action Item

Ian Tutt is requested to forward the light range calculation programme and supporting information as input documents to EEP16 and ANM15, with the aim, amongst other issues, of prompting an IALA discussion on the appropriate probability of detection levels to use in different design scenarios.

Ian Tutt also gave a presentation on the perception of flashing lights that addressed the issue of apparent versus effective intensity. This information is proposed to form the basis of an input paper to EEP16.

Action item

Ian Tutt is requested to submit an input paper on apparent and effective intensity of flashing lights to EEP16.

Sub Working Groups were formed to progress specific tasks as detailed below:

## ****Visual perception of lights and daymarks**** (Task 3\*)

### Draft Guideline on daymarks for AtoN

Input Paper EEP15/11/1, Draft Guideline on Daymarks for Floating AtoN was discussed and it was noted that the intended intercessional work on the document had not proceeded. As such it was agreed that Christian Lagerwall would lead a sub-group to look at the draft and develop it further. Specifically it was requested that as well as completing the theoretical calculation information it would be useful to give a quick ready reference table of typical buoy sizes and anticipated corresponding visual range that should be achieved in defined standard circumstances. As part of the development process it was agreed that the contents of the Guideline should be expanded to include all AtoN and not be restricted to floating AtoN. The enhanced draft was agreed to form an input document to EEP16.

Action Item

Christian Lagerwall is requested to lead inter-sessional work on EEP15/WG4/WP1.

The Secretariat is requested to forward a revised EEP15/WG4/WP1 (Draft Guideline on Daymarks for Aids to Navigation) to EEP16 after inter-sessional work.

Committee members are requested to provide pictures, standards, tables and share any practical knowledge / experience regarding daymarks, especially on daymarks not covered by the MBS that are in use in their countries.

### Guideline 1073 on Conspicuity of AtoN Signal Lights at Night (Work Item 4.2)

It was noted that Ian Tutt had already conducted some work with a sub-group on Input Paper EEP15/11/2, Draft Guideline 1073 on Conspicuity of AtoN Signal Lights at Night earlier in the week. It was noted that this document covers much of the work content of Task 3 as allocated to WG4. Ian Tutt agreed to continue to lead a sub –group to further develop Guideline 1073. It was noted that the work advised in Input Paper EEP15/11/5, Report of PWM Flickering Light Experiment in Actual Seas by Japan Coastguard, would be incorporated into Guideline 1073 as relevant.

Action Item

Ian Tutt is requested to lead inter-sessional work on EEP15/WG4/WP2.

The Secretariat is requested to forward a revised EEP15/WG4/WP2 (Draft Guideline 1073 on Conspicuity of AtoN Signal Lights at Night) to EEP16, after intersessional work by the ad hoc expert group on conspicuity.

### Degradation of LED Light Sources and In-service Verification (Work Item 4.3)

During discussion of the scope of work for WG4 it was agreed that the issue of LED light degradation and the verification of in-service performance would be beneficial to address. It was agreed that Aivar Usk would lead a sub-group to investigate this issue with a view to producing guidance on the subject area. This guidance, whilst covering LEDs, would also address other light sources and their verification of in-service performance and is to be incorporated into Guideline 1043 On Light Sources Used in Visual Aids to Navigation.

Action Items

Aivar Usk, Sami Lasma and Fernando Romero are requested to undertake intersessional work with Ian Tutt to modify guideline 1043, to include the degradation of light sources and the effect that this should have on the specification of equipment.

The Secretariat is requested to forward the revised Guideline 1043 (EEP15/WG4/ WP3) to EEP16, after inter-sessional work.

### Simulation for Establishment of Visible Light Communications Technology

Input Paper EEP/15/11/5, Simulation for Establishment of Visible Light Communications Technology was reviewed by a sub-working group lead by Martin Bransby. It was concluded that whilst no direct action on the work to date was required by IALA, it would be appropriate to monitor on-going developments in this area. However it was considered that ANM would be best placed to conduct this monitoring role and a Liaison Note to ANM and e-NAV (EEP15/output/5) requesting their views was prepared. This note should also be sent to EEP16 (WG1) as EEP15/WG1/WP for information.

Action Items

The Secretariat is requested to forward the Liaison Note on Visible Light Communications Technology (EEP15/output/5) to the ANM & e-NAV Committees.

The Secretariat is requested to forward EEP15/WG1/WP8 to EEP16.

# All Working Groups

## Knowledge Sharing / Knowledge Management, taking into account open source software (Task 1\*)

The Chairman led a discussion on potential mechanisms for knowledge sharing / management. Methods discussed included: LinkedIn (within which there is already an IALA group with 67 members) and Wikis. The IALA Wiki site ([www.ialathree.org/ialawiki](http://www.ialathree.org/ialawiki)) was demonstrated and it was noted that other useful addresses are: [www.ialathree.org/dictionary](http://www.ialathree.org/dictionary) and [www.ialathree.org/ialanet](http://www.ialathree.org/ialanet).

The possible use of a reflector site was mentioned, which is used extensively by the e-NAV Committee (AIS WG) and has been used on an ad hoc basis by the EEP Committee in the past. Programs available for the collaborative development and updating of documents were also discussed. The Chairmen concluded by asking for one or two volunteers to collaborate with him on developing some of the ideas mentioned.

## ****e-Navigation across Committees**** (Task 13\*)

EEP15/12/3 refers. At the opening plenary all Working groups were asked to review the IALA e-Navigation plan rev3 and determine whether it was necessary to pass any comment back to the e-NAV Committee.

It was considered that the Committee’s main interest in e-Navigation lies in remote monitoring and the power consumption of AtoN AIS. A Liaison note to e-NAV was written (EEP15/output/6).

Action item

The Secretariat is requested to forward the Liaison Note on IALA’s e-Navigation plan (EEP15/output/6) to the e-NAV Committee.

## ****Workshops and Seminars**** (Task 16\*)

Prior to the Working Groups being established there was a brief discussion about the list of EEP workshops and seminars previously submitted to the 46th session of the IALA Council (EEP15/12/1). General priorities were established for further discussion by the Working Groups. Following discussion the proposals below were agreed for forwarding to PAP (W = workshop & S = seminar):

S IALA Risk Management Toolbox, with marine incident causation – Annually - IALA

S Model training courses covering different AtoN systems and services (EEP) Promotion of the World Wide Academy - 2013 / 2014

W IALALITE/IALABATT – Norway -2012

S Heritage, Conservation and Civil Engineering aspects late May / early June 2013 – UK / Norway / Greece

W Arctic engineering aspects (civil engineering, power systems, environment) - 2014 – Canada

W Practical aspects of installing e-Navigation infrastructure (future WP?)

W Developments in floating aids and associated moorings – FLOATAID – low priority.

Action item

The Chairman is requested to present the Committee’s views on Workshops and Seminars at PAP20.

# Future Work Programme

Although some way ahead, members were asked to bear in mind the need to think about the future work programme and reminded that the IALA Strategy group were already asking questions of Committee Chairmen about this topic. One item already identified is the practical aspects of establishing an e-Navigation infrastructure.

# Review of output and working papers

Working Group Chairmen introduced their reports and output documents, the disposition of which were agreed.

During the remarks by the Chairman of WG2 some additional points were identified as requiring inclusion in the report.

Following the remarks by the Chairman of WG3, Aivar Usk gave a short presentation on work he had done, during the meeting, on developing his ideas for an XML based product information specification exchange standard. This led to a short discussion, in which the flexibility for display was demonstrated. It was confirmed that the format used was suitable for inclusion in a product database, thus allowing product comparison. Although each programme would be product specific the schema could be structured to cover all required product characteristics. It was confirmed that the program would be part of the equipment, which led to thoughts of remote monitoring and its use for compiling and storing historical data, such as test results. Questions were posed about the possible links to e-NAV work on meta data standards and the IALA Universal maritime Data Model.

Action item

The Secretariat is requested to forward the latest documentation on the IALA UMDM to the Chairman and Aivar Usk.

There then followed a brief discussion on a Conspicuity model and associated software introduced by Ian Tutt, after which it was agreed that it should first be seen by the ANM Committee and again at EEP16 before a decision is taken about how best to proceed with it.

The Chairman of WG4 raised the apparent imbalance in the WGs’ workload, most noticeably between WG1 and WG4. The Chairman said that this issue was already under consideration and would be addressed by the Vice Chairman and himself.

Action

The Chairman and Vice Chairman are requested to review the balance of work between the working groups before EEP16.

The Chairman then thanked the WG Chairs and members for their hard work and the good start that had been made at this opening session.

# Any Other Business

## Working Group Terms of Reference

The Chairman tabled a first draft of Working Group terms of reference (EEP15/CH/WP1). It was reviewed by the Committee and it was agreed that the paper be forwarded to EEP16.

Action item

The Secretariat is requested to forward EEP15/CH/WP1 to EEP16.

## Work Programme (2010 - 2014)

EEP15/15/1, EEP15/15/2 And EEP15/15/3 refer.

The Work Programme, as approved by the Council, was reviewed, taking into account the Work Programmes of the ANM and e-NAV Committees. Revisions were proposed and are shown in Annex G.

## New symbols for AIS AtoN - Japan

EEP15/15/4 refers.

The paper submitted by Japan Coast Guard was noted with interest. Michael Card was able to provide some background to the work being undertaken.

## IALA Committee input paper template

EEP15/15/5 refers.

Some examples of use of the template were noted by the Chairman, who encouraged members to use it in future, to establish the correct allocation of input papers and clarify the action expected from the Committee.

## VTS in VTM

EEP15/15/6 refers.

The liaison note from the VTS committee was noted by the Committee, which had no comment at this time.

## IALA Publications List and web site

It was observed that the entry for Recommendation E-107 was incorrect and that some documents, when downloaded from the website were not the current versions.

Action item

The Secretariat is requested to correct errors in the IALA publications list and the versions of documents on the IALA web site.

## Cross-checking of work

It was suggested and generally agreed that Committee members should cross-check their work with the NAVGUDE and the IALA Dictionary. The Chairman observed that was especially the case for WG3.

## Searching IALA Recommendations & Guidelines

In a discussion about the benefits of being able to search IALA Recommendations and Guidelines, it was noted that an earlier attempt to create such a facility had not been successful and it was suggested that technology available today may make the task easier to achieve. The publication search capability available on the IALA website was demonstrated but it its filtering capability needs refining. It was also observed that the capability proposed may make it possible to determine gaps in IALA’s knowledge coverage.

Action item

Aivar Usk is requested, if possible, to provide an input paper, indicating his views on how a search capability might best be achieved, to EEP16.

## Status of the Emergency Wreck Marking Buoy (EWMB)

After a short discussion, following the raising of a query about the status of the EWMB, it was clear that several countries are deploying it but that its precise status was unknown. Hendrik Eusterbarkey volunteered to research the point.

Action item

Hendrik Eusterbarkey is requested to investigate the official status of the EWMB and report it at EEP16.

# Date and venue of next meeting

It is intended that EEP16 will meet between 28 March and 1 April, 2011 in the new IALA headquarters.

Full details of how to get to the new address will be forwarded with the first invitation for the meeting and will also be posted on the website.

# Review of session report

The report of the meeting (EEP15/output/1) was reviewed and approved by the Committee.

Action item

The Secretariat is requested to forward EEP15/output/1 (EEP15 Committee report) to Council for their consideration.

# Closing of the Meeting

On behalf of the editor of The Bulletin, the Chairman urged Committee members provide input for future editions, saying that the publication would benefit from good technical articles. He encouraged everyone to attend the next meeting, before thanking everyone for their contributions during the week and the Working Group Chairmen for their leadership. He said that, if possible, he hoped to see everyone even more focussed and wished them the best of luck with the Action List.

He thanked the Secretary and the Secretariat for their support and concluded by wishing everyone a safe trip home.

# List of Annexes

1. Agenda

A copy of the agenda is at Annex A.

1. Participants

A list of EEP15 participants is at Annex B.

1. Working Group 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. Action Items

A list of action items is at Annex F.

1. Revision of the Work Programme

A revised detailed work programme is at Annex G.

1. Detailed Work Programme

A detailed work programme is at Annex H

1. Developments in lighthouse conservation

Reports from members on the status of lighthouse conservation are at Annex I.

1. New IEC Standards applicable to battery technology

These standards are at Annex J.

1. Agenda

**15th Meeting of the Engineering, Environmental & Preservation of Historic Lighthouses Committee**

The 15th meeting of the **EEP Committee** will be held from 4 – 8 October, 2010 at IALA Headquarters, St Germain en Laye, France.

The opening plenary will commence at 1300 on Monday, 4 October and the closing plenary will end at approximately 1300 on Friday, 8 October.

Committee Chair, Vice-Chair and Working Group Chairpersons are requested to meet at 0930 on Monday, 4 October.

**AGENDA**

1. Approval of the agenda
2. Review of action items from last meeting
3. Review of input papers
4. Reports from other bodies:
   1. IALA Council – 46th Session, December 2009
   2. IALA Council – 47th Session, March 2010
   3. IALA Council – 48th Session, March 2010
   4. IALA Council – 49th Session, June 2010
   5. IMO –MSC87, May 2010
   6. IMO – NAV56, July 2010
   7. IALA 17th Conference (Cape Town), March 2010
   8. PAP19, October 2009
5. Reports from Rapporteurs:
   1. Developments in Aids to Navigation (M1\*)
   2. Developments in Renewable Energy Sources (M2\*)
   3. Developments in Battery Technology (M3\*)
   4. Developments in New Light Sources (M4\*)
   5. IALA Certification Process (M5\*)
   6. CIE-IALA Liaison (M6\*)
6. Presentations
   1. IALA World-Wide Academy Jean-Charles Leclair
   2. Radioactive Lightning Rods Direcção de Faróis
   3. Proposal for voluntary standard Aivar Usk
7. Establish Working Groups
8. Working Group 1 - Aids to navigation design and maintenance (WG1)
   1. **AtoN Engineering (Task 2)**
   2. **Power Systems and Energy Storage** (Task 4\*)
   3. **Remote Control and Monitoring** (Task 5\*)
   4. The use of Audible Signals as aids to navigation (*in conjunction with ANM*) (Task 15\*)
   5. **Risk Assessment Techniques in AtoN Design and maintenance** (Task 11\*)
   6. **Polar Engineering** (Task 14\*)
9. **Working Group 2 –** Heritage, Conservation and Civil Engineering (WG2)
   1. **Heritage and Conservation** (Task 9\*)
   2. **Civil Engineering and Structures** (Task 10\*)
10. **Working Group 3 -** Environment, quality assurance and publications (WG3)
    1. **Environment and safety** (Task 6\*)
    2. **Product Certification** (Task 8\*)
    3. **Quality Management** (Task 12\*)
    4. **Aids to Navigation Training, IALA WWA** (Task 7\*)
11. **Working Group 4 – Light and Vision (WG4)**
    1. **Visual perception of lights and daymarks** (Task 3\*)
12. **All Working Groups**
    1. Knowledge Sharing / Knowledge Management, taking into account open source software (Task 1\*)
    2. **e-Navigation across Committees** (Task 13\*)
    3. **Workshops and Seminars** (Task 16\*)
13. Future Work Programme (2014 – 2018)
14. Review of output and working papers
15. Any other business
    1. Work Programme (2010 – 2014)
    2. New symbols for AIS AtoN – Japan
    3. IALA committee input paper template
    4. VTS in VTM
16. Date and venue of next meeting
17. Review of session report
18. List of Participants

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1. Working Group Participants
2. Aids to navigation design and maintenance

|  |  |  |
| --- | --- | --- |
|  | **Name** | **Organisation / Country** |
|  | Adrian Wilkins (Chairman) | Pharos Marine / England |
|  | Mike Card (Rapporteur) | Zeni Lite Buoy Company Ltd, Japan |
|  | Ali Rashid Al Kalbani | AMNAS / Oman |
|  | Nicolas Auger | Phares et Balises du Finestere, SPBF / France |
|  | Michel Cousquer | CETMEF / France |
|  | Hendrik Eusterbarkey | Waterways & Shipping Administration / Germany |
|  | Adam Hay | NAWAE / Papua New Guinea |
|  | Sipke Hoekstra | North Sea Directorate / Netherlands |
|  | Tamotsu Ikeda | JANA / Japan |
|  | Errol Joppich | Australian Maritime Systems / Australia |
|  | Peter Kelly | Trinity House / England |
|  | Jong-Uk Kim | Korean Association of AtoNs / Korea |
|  | Leif Arne Larsen | NCA / Norway |
|  | Sami Lasma | Finnish Transport Agency / Finland |
|  | Fong-to Leung | Marine Department / Hong Kong |
|  | Shaheen H Mirza | MENAS / Bahrain |
|  | Richard Moore | CCG / Canada |
|  | Shin Okubo | JCG / Japan |
|  | Paulo Mauricio Rego | CAMR / Brazilian Lighthouse Service |
|  | Fernando Romero | Mediterraneo Senalese Maritimas / Spain |
|  | Arlindo Santos | Direcção de Faróis / Portugal |
|  | Manuel Santos | Direcção de Faróis / Portugal |
|  | Joel Tourbot | CETMEF / France |
|  | Aivar Usk | Cybernetica AS / Estonia |
|  | Moray Waddell | Nothern Lighthouse Board / Scotland |
|  | Shen Zhijiang | China Maritime Safety Administration / China |

1. Heritage and civil engineering

|  |  |  |
| --- | --- | --- |
|  | **Name** | **Organisation / Country** |
|  | Bob McIntosh (Chair) | Northern Lighthouse Board / Scotland |
|  | David Jeffkins | AMSA / Australia |
|  | Christian Lagerwall | SMA / Sweden |
|  | Carmen Martinez | Puertos del Estado / Spain |
|  | Apostolia Oikonomopoulu | University of Thessaloniki / Greece |
|  | Vasiliti Pachta | University of Thessaloniki / Greece |
|  | Ioanna Papayianni | University of Thessaloniki / Greece |
|  | Phillipe Renaudin | CETMEF / France |
|  | Jo van der Eynden | Lindesnes Lighthouse Museum / Norway |
|  | Yang Youliang | China MSA |

1. Environment, quality assurance and publications

|  |  |  |
| --- | --- | --- |
|  | **Name** | **Organisation / Country** |
|  | David Jeffkins (Chair) | AMSA / Australia |
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|  | Jean-Charles Leclair | IALA |
|  | Shaheen H Mirza | MENAS / Bahrain |
|  | Richard Moore | Canadian Coast Guard |
|  | Shen Zhijiang | China MSA |

1. Light and Vision

|  |  |  |
| --- | --- | --- |
|  | **Name** | **Organisation** |
|  | Peter Kelly (Chairman) | Trinity House / England |
|  | Moray Waddell (Rapporteur) | Northern Lighthouse Board / Scotland |
|  | Yves-Marie Blanchard | CETMEF / France |
|  | Martin Bransby | GLA, Research and Navigation / UK and Ireland |
|  | Michael Card | Zeni Lite Buoy Co. Ltd. / Japan |
|  | Alessio Chianura | Italian Navy |
|  | Sipke Hoekstra | North Sea Directorate / Netherlands |
|  | Frank Herman | Waterways & Shipping Administration / Germany |
|  | Jong-Uk Kim | KAAN / Korea |
|  | Christian Lagerwall | Swedish Maritime Administration |
|  | Leif Arne Larsen | NCA / Norway |
|  | Sami Lasma | Finnish Transport Agency / Finland |
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|  | Paulo Mauricio Rego | CAMR / Brazil |
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|  | Fernando Romero | Mediterraneo Senalese Maritimas / Spain |
|  | Arlindo Santos | Direcção de Faróis / Portugal |
|  | Manuel Santos | Direcção de Faróis / Portugal |
|  | Joel Tourbot | CETMEF / France |
|  | Ian Tutt | GLA, Research and Navigation / UK and Ireland |
|  | Aivar Usk | Cybernetica AS / Estonia |
|  | Yang Youliang | China MSA |

1. List of Input Papers

All papers are posted on the FTP server – Late papers are now in a Zip file

Items highlighted are not on the Committee website.

1. Approval of the agenda

|  |  |  |  |
| --- | --- | --- | --- |
| Number | Title / Author (if required) | Presented by: | Posting |
| EEP15/1/1 | Draft Agenda rev2 | Ómar Eriksson (OFE) |  |
| EEP15/1/2 | Programme for EEP15 (to be issued after the Chairman’s Meeting) | OFE |  |

1. Review of action items from last meeting

|  |  |  |  |
| --- | --- | --- | --- |
| Number | Title / Author (if required) | Presented by: | Posting |
| EEP15/2/1 | Review of Action Items from EEP14 | OFE / IALA | 1 |

1. Review of input papers

|  |  |  |  |
| --- | --- | --- | --- |
| Number | Title / Author (if required) | Presented by: | Posting |
| EEP15/3/1 | List of Input Papers | OFE/IALA |  |

1. Reports from other bodies

|  |  |  |  |
| --- | --- | --- | --- |
| Number | Title / Author (if required) | Presented by: | Posting |
| EEP15/4/1 | IALA COUNCIL 46th Session | OFE/IALA | 1 |
| EEP15/4/2 | IALA COUNCIL 47th Session | OFE/IALA | 1 |
| EEP15/4/3 | IALA COUNCIL 48th Session | OFE/IALA | 1 |
| EEP15/4/4 | IALA COUNCIL 49th Session | OFE/IALA | 2 |
| EEP15/4/5 | MSC87 report | OFE/IALA | 1 |
| EEP15/4/6 | NAV56 report | OFE/IALA | 2 |
| EEP15/4/7 | IALA 17th Conference (Cape Town) Report | OFE/IALA | 1 |
| EEP15/4/8 | PAP19 Report | OFE/IALA | 1 |

1. Reports from Rapporteurs

| Number | Title / Author (if required) | Presented by | Posting |
| --- | --- | --- | --- |
| EEP15/5/ | Developments in Aids to Navigation (M1) | Adrian Wilkins |  |
| EEP15/5/ | Developments in Renewable Energy Sources (M2) | Moray Waddell |  |
| EEP15/5/ | Developments in Battery Technology (M3) | David Jeffkins |  |
| EEP15/5/4 | Developments in New Light Sources (M4) | Ian Tutt | 4 |
| EEP15/5/4a | Citizen High Watt LED products | Ian Tutt | 4 |
| EEP15/5/ | IALA Certification Process (M5\*) | David Jeffkins |  |
| EEP15/5/6 | CIE – IALA Liaison (M6\*) | Ian Tutt | 4 |
| EEP15/5/6a | CIE TC 4 47 Chapter 4.2 LED maintenance and lifetime-1,input | Ian Tutt | 4 |

1. Presentations
2. Establish Working Groups
3. Working Group 1 - Aids to navigation design and maintenance (WG1)
   1. ****AtoN Engineering (Task 2)****
   2. ****Power Systems and Energy Storage**** (Task 4\*)
   3. ****Remote Control and Monitoring**** (Task 5\*)
   4. The use of Audible Signals as aids to navigation (*in conjunction with ANM*) (Task 15\*)
   5. ****Risk Assessment Techniques in AtoN Design and maintenance**** (Task 11\*)
   6. ****Polar Engineering**** (Task 14\*)

|  |  |  |  |
| --- | --- | --- | --- |
| Number | Title / Author (if required) | WG | Posting |
| EEP15/8/1 | Cormorants at Swedish lighthouses | 1 | 1 |
| EEP15/8/2 | Development of lithium polymer battery for AtoN in Korea | 1 | 1 |
| EEP15/8/3  Now EEP15/10/5 | Draft Guidelines for the accreditation of level 1 AtoN Training |  | 1 |
| EEP15/8/4 | Preventive measures against smear from seabird droppings on PV panels – JCG  **Renumbered from EEP15/11/3** | 1 | 4 |

1. Working Group 2 - Heritage and civil engineering (WG2)
   1. ****Heritage and Conservation**** (Task 9\*)
   2. ****Civil Engineering and Structures**** (Task 10\*)

| Number | Title / Author (if required) | WG | Posting |
| --- | --- | --- | --- |
| EEP15/9/1 | Draft Guideline on the selection and the display of historic artefact | 2 | 1 |
| EEP15/9/1 rev1 | Draft Guideline on the selection and the display of historic artefacts | 2 | 2 |
| EEP15/9/2 | Note on EEP15/9/1 rev1 | 2 | 2 |
| EEP15/9/3 | Heritage Publicity information | 2 | 3 |
| EEP15/9/4 | History of Floating Aids to Navigation | 2 | 3 |
| EEP15/9/5 | Lighthouse Heritage at 17th IALA Conference | 2 | 3 |
| EEP15/9/6 | Work Session 2010-2014 – WG2 | 2 | 3 |
| EEP15/9/7 | Draft Guideline on the selection and the display of historic artefacts V2 | 2 | Late |

1. Working Group 3 - Environment, quality assurance and publications (WG3)
   1. ****Environment and safety**** (Task 6\*)
   2. ****Product Certification**** (Task 8\*)
   3. ****Quality Management**** (Task 12\*)
   4. ****Aids to Navigation Training, IALA WWA**** (Task 7\*)

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| --- | --- | --- | --- |
| Number | Title / Author (if required) | WG | Posting |
| EEP15/10/1 | Product certification – requested discontinuation – Pharos/API | 3 | 4 |
| EEP15/10/2 | Product certification – suggested discontinuation – IMC | 3 | 4 |
| EEP15/10/3 | Safe practice - working at heights | 3 | 4 |
| EEP15/10/4 | Text from IMC Assembly – Product certification | 3 | Late |
| EEP15/10/5 | Draft Guidelines for the accreditation of level 1 AtoN Training | 3 | Late |

1. Working Group 4 - Light and vision (WG4)
   1. ****Visual perception of lights and daymarks**** (Task 3\*)

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| --- | --- | --- | --- |
| Number | Title / Author (if required) | WG | Posting |
| EEP15/11/1 | Draft Guideline on Daymarks for Floating AtoN | 4 | 1 |
| EEP15/11/2 | Draft Guideline 1073 on Conspicuity of AtoN Signal Lights at Night | 4 | 1 |
| EEP15/11/3 | Preventive measures against smear from seabird droppings on PV panels – JCG  Renumbered to EEP15/8/4 | 4 | 4 |
| EEP15/11/4 | Report of PWM Flickering Light Experiment in Actual Seas - JCG | 4 | 4 |
| EEP15/11/5 | Simulation for Establishment of Visible Light Communications technology | 4 | 4 |

1. All Working Groups
   1. Knowledge Sharing / Knowledge Management, taking into account open source software (Task 1\*)
   2. ****e-Navigation across Committees**** (Task 13\*)
   3. ****Workshops and Seminars**** (Task 16\*)

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| Number | Title / Author (if required) | WG | Posting |
| EEP15/12/1 | Bids for Workshops & Seminars 2010-2014 | All | 1 |
| EEP15/12/2 | IALA Plan for e-Navigation rev2 | All | 1 |
| EEP15/12/3 | IALA e-Navigation Plan rev 3 | All | 5 |

1. Future Work Programme
2. Review of output and working papers
3. Any other business
   1. Approved Work Programme
   2. New symbols for AIS AtoN – Japan
   3. IALA committee input paper template
   4. VTS in VTM

|  |  |  |  |
| --- | --- | --- | --- |
| Number | Title / Author (if required) | WG | Posting |
| EEP15/15/1 | Work Programme for EEP (2010 – 2014), as approved by Council46. | All | 1 |
| EEP15/15/1 rev1 | Work Programme for EEP (2010 – 2014), as approved by Council46. | All | 3 |
| EEP15/5/1  rev2 | Work Programme for EEP (2010 – 2014), as approved by Council46 and modified at EEP15 | All | Late |
| EEP15/15/2 | ANM Work Programme 2010-2014\_as amended at Council46 | WG Chairs | 2 |
| EEP15/15/3 | e-NAV Work Programme 2010-2014\_as approved at Council 49 | WG Chairs | 2 |
| EEP15/15/4 | New symbols for AIS-Aids to Navigation (AIS-AtoN) – submission to MSC88 by Japan and USA | All | 3 |
| EEP15/15/5 | Draft IALA Committee input paper template | All | 3 |
| EEP15/15/6 | Liaison note from VTS – VTS in VTM | All | 4 |

1. Date and venue of next meeting
2. Review of session report
3. List of Output and Working Papers

Output documents are submitted for review by a body other than the Committee initiating the document.

| Number | Title | Status |
| --- | --- | --- |
| EEP15/output/1 | Draft Report of EEP15 | To Council for consideration |
| EEP15/output/2 | Liaison note to ANM – synchronised & sequenced buoy lighting systems | To ANM15 |
| EEP15/output/3 | Liaison note to e-NAV – AIS monitoring | To e-NAV9 |
| EEP15/output/4 | Liaison note to ANM – audible signals | To ANM15 |
| EEP15/output/5 | Liaison note to ANM and e-NAV - visible light communications technology | To ANM15 & e-NAV9 |
| EEP15/output/6 | Liaison note to e-NAV – IALA e-Navigation plan | To e-NAV9 |

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

| Number | Title | Status |
| --- | --- | --- |
| EEP15/WG1/WP1 | Suggested changes to Guideline 1067-3 | To EEP16 |
| EEP15/WG1/WP2 | Plastic buoys headlines questionnaire | To EEP16 |
| EEP15/WG1/WP3 | Buoy comparison document from 2004 | To EEP16 |
| EEP15/WG1/WP4 | Polar engineering | To EEP16 |
| EEP15/WG1/WP5 | Draft revised Guideline 1012 - lightning protection | To EEP16 |
| EEP15/WG1/WP6 | Draft Guideline bird deterrent without attachments | To EEP16 |
| EEP15/WG1/WP7 | Draft Guideline bird deterrent with attachments | To EEP16 |
| EEP15/WG1/WP8 | Liaison note to ANM and e-NAV - visible light communications technology | To EEP16 |
|  |  |  |
| EEP15/WG2/WP1 | History of floating aids - notes | To EEP16 |
| EEP15/WG2/WP2 | Complementary Use Questionnaire | To EEP16 |
| EEP15/WG2/WP3 | Draft Guideline on the selection and the display of historic artefacts | To EEP16 |
| EEP15/WG2/WP4 | Note on EEP15/WG2/WP3 | To EEP16 |
| EEP15/WG2/WP5 | Guideline on The selection and the display of historic artefacts V2.0 | To EEP16 |
|  |  |  |
| EEP15/WG3/WP1 | Carbon Saving - Carbon Trust | To EEP16 |
| EEP15/WG3/WP2 | Draft Guideline for the accreditation of level 1 AtoN Training | To EEP16 |
| EEP15/WG3/WP3 | Draft Model course - AtoN moorings | To EEP16 |
| EEP15/WG3/WP4 | Response from IMC with respect to an IALA product searchable database | To EEP16 |
|  |  |  |
| EEP15/WG4/WP1 | Draft Guideline on Daymarks for AtoN | To EEP16 after intersessional work |
| EEP15/WG4/WP2 | Draft revised Guideline 1073 on Conspicuity of AtoN Signal Lights at Night | To EEP16 after intersessional work |
| EEP15/WG4/WP3 | Draft revised Guideline 1043 Ed1.2 Light Sources used in Visual Aids to Navigation | To EEP16 after intersessional work |
|  |  |  |
| EEP15/CH/WP1 | Working Groups - Terms of Reference | To EEP16 |

1. Action Items

Action Items for the IALA Secretariat

1. [The Secretariat is requested to forward the Liaison Note seeking ANM guidance on how to handle this general question of failure of synchronisation/sequencing or the failure of individual lights within a group of synchronised/sequenced lights in a channel (EEP15/output/2). 11](#_Toc274480838)
2. [The Secretariat is requested to forward EEP15/WG1/WP2 to EEP members. 11](#_Toc274480839)
3. [The Secretariat is requested to forward EEP15/WG1/WP6 & EEP15/WG1/WP7 to EEP16. 12](#_Toc274480840)
4. [The Secretariat is requested to forward the revised EEP15/WG1/WP5 to EEP16. 12](#_Toc274480841)
5. [The Secretariat is requested to forward EEP15/WG1/WP1 to EEP16. 12](#_Toc274480842)
6. [The Secretariat is requested to forward the Liaison Note from EEP on IALA guidance on the technical aspects of AIS (EEP15/output/3) to the e-NAV Committee. 13](#_Toc274480843)
7. [The Secretariat is requested to forward the Liaison Note from EEP on IALA guidance on the technical aspects of AIS (EEP15/output/3) to Rolf Zetterberg by e-mail. 13](#_Toc274480844)
8. [The Secretariat is requested to forward the Liaison Note on audible signals, concerning the future navigational requirements for audible signals, (EEP15/output/4) to the ANM Committee. 13](#_Toc274480845)
9. [The Secretariat is requested to forward EEP15/WG1/WP4 to EEP16. 14](#_Toc274480846)
10. [The Secretariat is requested to forward EEP15/WG2/WP3, EEP15/WG2/WP4 & EEP15/WG2/WP5 to EEP16. 15](#_Toc274480847)
11. [The Secretariat is requested to forward EEP15/WG2/WP1 to EEP16. 16](#_Toc274480848)
12. [The Secretariat is requested to forward EEP15/WG2/WP2 to EEP16. 16](#_Toc274480849)
13. [The Secretariat is requested to forward EEP15/WG3/WP1 (Carbon saving) to EEP16. 20](#_Toc274480850)
14. [The Secretariat is requested to create a new link on the IALA website called AtoN Products and Services and link the current industrial members page to this link. 21](#_Toc274480851)
15. [The Secretariat is requested to forward the response from the IMC (EEP15/WG3/WP4) in relation EEP14/output/19 (Liaison note to the Industrial Members Committee soliciting their comments with respect to a searchable product database) to EEP16. 21](#_Toc274480852)
16. [The Secretariat is requested to forward EEP15/WG3/WP2 (Draft Guideline for the accreditation of AtoN training) to EEP16. 22](#_Toc274480853)
17. [The Secretariat is requested to forward EEP15/WG3/WP3 (Model course – AtoN moorings) to EEP16. 22](#_Toc274480854)
18. [The Secretariat is requested to forward a revised EEP15/WG4/WP1 (Draft Guideline on Daymarks for Aids to Navigation) to EEP16 after inter-sessional work. 23](#_Toc274480855)
19. [The Secretariat is requested to forward a revised EEP15/WG4/WP2 (Draft Guideline 1073 on Conspicuity of AtoN Signal Lights at Night) to EEP16, after intersessional work by the ad hoc expert group on conspicuity. 23](#_Toc274480856)
20. [The Secretariat is requested to forward the revised Guideline 1043 (EEP15/WG4/ WP3) to EEP16, after inter-sessional work. 23](#_Toc274480857)
21. [The Secretariat is requested to forward the Liaison Note on Visible Light Communications Technology (EEP15/output/5) to the ANM & e-NAV Committees. 23](#_Toc274480858)
22. [The Secretariat is requested to forward EEP15/WG1/WP8 to EEP16. 23](#_Toc274480859)
23. [The Secretariat is requested to forward the Liaison Note on IALA’s e-Navigation plan (EEP15/output/6) to the e-NAV Committee. 24](#_Toc274480860)
24. [The Secretariat is requested to forward the latest documentation on the IALA UMDM to the Chairman and Aivar Usk. 25](#_Toc274480861)
25. [The Secretariat is requested to forward EEP15/CH/WP1 to EEP16. 25](#_Toc274480862)
26. [The Secretariat is requested to correct errors in the IALA publications list and the versions of documents on the IALA web site. 26](#_Toc274480863)
27. [The Secretariat is requested to forward EEP15/output/1 (EEP15 Committee report) to Council for their consideration. 27](#_Toc274480864)

Action Items for Members

1. [Sipke Hoekstra and Nicolas Auger were requested to continue their work on the economic and practical factors related to synthetic moorings and plastic buoys, and to submit one or two input paper(s) on these topics to EEP16. 11](#_Toc274480865)
2. [Committee members were requested to complete the questionnaire on plastic buoys and synthetic mooring (EEP15/WG1/WP2) and submit it in advance of EEP16. 11](#_Toc274480866)
3. [Committee members are requested to forward practical information on the measures they use to combat the bird fouling problem before EEP16 and to submit comments on the early draft guideline (EEP15/WG1/WP6). 12](#_Toc274480867)
4. [Arlindo Santos, Manuel Santos and Paulo Rego are requested to revise the Portuguese part of EEP15/WG1/WP5 and submit a new input paper for EEP16. 12](#_Toc274480868)
5. [Committee members are requested to comment on the proposed changes to Guideline 1012 (EEP15/WG1/WP5) before EEP16. 12](#_Toc274480869)
6. [Committee members are requested to submit information on their experience and practices with the practical installation of AIS AtoN systems to EEP16. 12](#_Toc274480870)
7. [Committee members were requested to comment on the proposed changes to Guideline 1067-3. EEP15/WG1WP1 12](#_Toc274480871)
8. [Committee members were requested to provide information to EEP16 on the use of LiFePO4 batteries in AtoN applications. 12](#_Toc274480872)
9. [Committee members are requested to provide input to EEP16 on problems encountered and their solutions in implementing monitoring by AIS, so that it can be collated and forwarded to the e-NAV Committee. 13](#_Toc274480873)
10. [Committee members are requested to provide input to EEP16 on the current use of sound signals and the policies for the future use of such signals. Information on number, frequency, range, and recent servicing experience and problems would be valuable. 13](#_Toc274480874)
11. [Nicholas Auger is requested to provide the French presentation on risk assessment techniques as an input to EEP16. 14](#_Toc274480875)
12. [Committee members are requested to submit input on polar engineering before EEP16. 14](#_Toc274480876)
13. [Paulo Mauricio Rego is requested to provide information on Brazilian experience in installing fixed structures in the Antarctic. 14](#_Toc274480877)
14. [WG2 members are requested to consider all aspects of the IALA Lighthouse Conservation Manual, as discussed, and submit proposals for ways in which a revised version could be improved. 14](#_Toc274480878)
15. [David Jeffkins is requested to combine EE15/WG2/WP3, EEP15/WG2/WP4 and AMSA document (EEP15/WG2/WP5) to provide further draft of Guideline on Selection and Display of Historic Artefacts and circulate to WG2 members for comment. 15](#_Toc274480879)
16. [WG2 members are requested to comment on draft of Guideline on Selection and Display of Historic Artefacts and return comments David Jeffkins prior to EEP16. 15](#_Toc274480880)
17. [David Jeffkins is requested to incorporate responses from WG2 members and submit revised draft of Guideline on Selection and Display of Historic Artefacts as input to EEP16. 15](#_Toc274480881)
18. [Christian Lagerwall is requested to prepare a paper to provide an outline for the contents of the Guideline on the transfer of redundant lighthouses and circulate it to WG2 members for comment. 15](#_Toc274480882)
19. [WG2 members are requested to respond to the paper on the guideline on transfer of redundant lighthouses to Christian Lagerwall prior to EEP16. 15](#_Toc274480883)
20. [Christian Lagerwall is requested to include comments from members and submit a revised paper to provide an outline for the contents of the guideline on transfer of redundant lighthouses to EEP16. 15](#_Toc274480884)
21. [Bob McIntosh is requested to complete draft case study reports on Nakkehoved and Cabo Mayor Lighthouses and circulate these reports to Working Group 2 members for comment. 15](#_Toc274480885)
22. [WG2 members are requested to respond to the draft case study reports on Nakkehoved and Cabo Mayor Lighthouses to Bob McIntosh prior to EEP16. 15](#_Toc274480886)
23. [Bob McIntosh is requested to include the comments from members and submit revised draft case study reports on Nakkehoved and Cabo Mayor Lighthouses to EEP16. 16](#_Toc274480887)
24. [Committee Members are encouraged to read Adrian Wilkins paper on The History of Floating AtoN (EEP15/WG2/WP1) and are requested to provide Adrian Wilkins or Bob McIntosh with any information or sources of information on the History of Floating Aids to Navigation before EEP16. 16](#_Toc274480888)
25. [Adrian Wilkins is requested to include any additional information received in The History of Floating AtoN (EEP15/WG2/WP1) and to include a list of references in the document and to submit it as an input paper to EEP16. 16](#_Toc274480889)
26. [WG2 members are requested to review EEP15/WG2/WP2 Questionnaire on Complementary Uses and to send comments to Jo van der Eynden before EEP16. 17](#_Toc274480890)
27. [Jo van der Eynden is requested to include the suggestions from EEP15 and those received from WG2 members and to submit a revised list of questions to be included in the questionnaire as an input paper to EEP16. 17](#_Toc274480891)
28. [Bob McIntosh is requested to discuss the options for the issue of the Questionnaire on Complementary Uses of Historic Lighthouses with the IALA Secretariat and report back to EEP16. 17](#_Toc274480892)
29. [Bob McIntosh is requested to discuss the set-up of the Heritage page on the IALA Website with the IALA Secretariat and details of what, how and when information will be included. 17](#_Toc274480893)
30. [WG2 members are requested to consider topics for future articles to be included in the IALA Bulletin within “The Lighthouse Preservation Corner” and to provide these to Bob McIntosh. 17](#_Toc274480894)
31. [Bob McIntosh to meet editorial deadlines to ensure that articles are available for each bulletin wherever possible by passing suitable articles to the editor for inclusion in “The Lighthouse Preservation Corner”. 17](#_Toc274480895)
32. [Bob McIntosh is to confirm to Paul Ridgway that WG2 will support his articles on preserved lighthouse tenders and light vessels and assist in editorial work if required. 17](#_Toc274480896)
33. [Committee members are requested to submit any information they or their authorities have on preserved lighthouse tenders and light vessels to Bob McIntosh or Paul Ridgway. 17](#_Toc274480897)
34. [Bob McIntosh is requested to continue to monitor the list of people who indicated an interest in Heritage and Conservation of Historic Lighthouses, to ensure that they are updated on developments. 18](#_Toc274480898)
35. [WG2 members are requested to investigate a suitable host and location for a possible IALA Seminar on Maintaining Historic Lighthouses to be held around June 2013. 18](#_Toc274480899)
36. [Committee Chairman and members are requested to confirm the appropriate working group for work item 9.2.1 (Produce guideline on anti-fouling techniques (marine growth) for floating aids, boat landings, etc.). 18](#_Toc274480900)
37. [Ron Blakeley is requested to submit an input paper for EEP16 on expanding the Guideline on building maintenance and conditioning in low energy environments on possible future areas of research and discussion. 19](#_Toc274480901)
38. [Committee members are requested to provide information on building maintenance and conditioning in low energy environments within their authorities or to provide contact details for an individual who may be able to provide this information to Bob McIntosh. 19](#_Toc274480902)
39. [Bob McIntosh is requested to consider the scope of existing Lighthouse Maintenance Guidance and to submit an input paper to EEP 16 on the way forward for a future guideline. 19](#_Toc274480903)
40. [David Jeffkins is requested to provide the Canadian Coast Guard fall protection program information to MSQ. 20](#_Toc274480904)
41. [Ron Blakeley is requested to provide advice and information on the Trinity House experience in treating legionella and coli bacteria in water supplies of destaffed AtoN stations. 20](#_Toc274480905)
42. [Adam Hay is requested to develop an outline for a new Guideline on the Development of Safety Management Plan for AtoN Activities and submit to EEP16. 20](#_Toc274480906)
43. [Errol Joppich is requested to review the NAVGUIDE content on the safe handling and management of mercury and submit any improvements to EEP16. 20](#_Toc274480907)
44. [Aivar Usk is requested to submit a paper to EEP16 further discussing his proposed product data standard. 21](#_Toc274480908)
45. [WG members are requested to review the draft guideline on Accreditation of Level 1 AtoN Training (EEP15/WG3/WP2) and provide input to EEP16. 22](#_Toc274480909)
46. [WG members are requested to develop additional Level 2 technician Model Courses as input to EEP16. 22](#_Toc274480910)
47. [WG members are requested to co-ordinate the development of additional Model Courses with Jean-Charles Leclair (jean.leclair@wanadoo.fr) to ensure that the same task is not duplicated. 22](#_Toc274480911)
48. [Ian Tutt is requested to forward the light range calculation programme and supporting information as input documents to EEP16 and ANM15, with the aim, amongst other issues, of prompting an IALA discussion on the appropriate probability of detection levels to use in different design scenarios. 22](#_Toc274480912)
49. [Ian Tutt is requested to submit an input paper on apparent and effective intensity of flashing lights to EEP16. 22](#_Toc274480913)
50. [Christian Lagerwall is requested to lead inter-sessional work on EEP15/WG4/WP1. 23](#_Toc274480914)
51. [Committee members are requested to provide pictures, standards, tables and share any practical knowledge / experience regarding daymarks, especially on daymarks not covered by the MBS that are in use in their countries. 23](#_Toc274480915)
52. [Ian Tutt is requested to lead inter-sessional work on EEP15/WG4/WP2. 23](#_Toc274480916)
53. [Aivar Usk, Sami Lasma and Fernando Romero are requested to undertake intersessional work with Ian Tutt to modify guideline 1043, to include the degradation of light sources and the effect that this should have on the specification of equipment. 23](#_Toc274480917)
54. [The Chairman is requested to present the Committee’s views on Workshops and Seminars at PAP20. 24](#_Toc274480918)
55. [The Chairman and Vice Chairman are requested to review the balance of work between the working groups before EEP16. 25](#_Toc274480919)
56. [Aivar Usk is requested, if possible, to provide an input paper, indicating his views on how a search capability might best be achieved, to EEP16. 26](#_Toc274480920)
57. [Hendrik Eusterbarkey is requested to investigate the official status of the EWMB and report it at EEP16. 26](#_Toc274480921)
58. Work Programme

**EEP Committee Work Programme (2010 – 2014)**

Approved by the IALA Council – December 2009

(Changes made/suggested at EEP15 are highlighted in yellow)

In the work of the Committee, the following general aspects are to be taken into consideration:

* Strategic focus of IALA;
* Harmonized use of Definitions and Terms;
* Work Programme 2010 – 2014.

| Task | Estimated number of sessions | Comments |
| --- | --- | --- |
| 1. Knowledge Sharing / Knowledge Management, taking into account open source software system. | 4 |  |
| 1. **AtoN Engineering – Visual Aids.** | 7 |  |
| 1. **Visual perception of lights and daymarks.** | 7 |  |
| 1. **Power Systems and Energy Storage.** | 3 |  |
| 1. **Remote Control and Monitoring.** | 3 |  |
| 1. **Environment and safety.** | 5 |  |
| 1. **Aids to Navigation Training, IALA WWA.** | 7 |  |
| 1. **Product Certification.** | 7 |  |
| 1. **Heritage and Conservation.** | 7 |  |
| 1. **Civil Engineering and Structures.** | 5 |  |
| 1. **Risk Assessment Techniques in AtoN Design and maintenance.** | 4 |  |
| 1. **Quality Management.** | 4 |  |
| 1. **e-Navigation across Committees.** | 7 |  |
| 1. **Polar Engineering** | 4 |  |
| 1. Examine The use of Audible Signals as aids to navigation and develop an IALA Guideline on their future. | 2 – 4 | *Together with the ANM Committee.* |
| 1. **Workshops and Seminars.** | 7 |  |

Monitoring Items

|  |  |  |  |
| --- | --- | --- | --- |
| Task | Duration | Comment | Strategy Element(s) |
| M1 Developments in Aids to Navigation | Continuous | Adrian Wilkins |  |
| M2 Developments in Renewable Energy Sources | Continuous | Moray Waddell |  |
| M3 Developments in Battery Technology | Continuous | Wayne Danzik |  |
| M4 Developments in New Light Sources | Continuous | Ian Tutt / Frank Hermann? |  |
| M5 IALA Certification Process | Continuous | Wayne Danzik |  |
| M6 CIE-IALA Liaison | Continuous | Ian Tutt / ? |  |

Deferred Items

|  |  |  |  |
| --- | --- | --- | --- |
| Task | No. of sessions | Comment | Strategy Element(s) |
| D1 None at this time |  |  |  |

**EEP Committee Work Plan - 2010 – 2014**

| Task | Session | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 1. Knowledge Sharing / Knowledge Management, taking into account open source software system | x | x | x | x |  |  |  |
| 1. **AtoN Engineering  ~~Visual Aids~~** | x | x | x | x | x | x | x |
| 1. **Visual perception of lights and daymarks** | x | x | x | x | x | x | x |
| 1. **Power Systems and Energy Storage** |  |  | x | x | x |  |  |
| 1. **Remote Control and Monitoring** |  |  |  | x | x | x |  |
| 1. **Environment and safety** | x | x | x | x |  |  |  |
| 1. **Aids to Navigation Training, IALA WWA** | x | x | x | x | x | x | X |
| 1. **Product Certification** | x | x | x | x | x | x | X |
| 1. **Heritage and Conservation** | x | x | x | x | x | x | X |
| 1. **Civil Engineering and Structures** | x | x | x | x | x |  |  |
| 1. **Risk Assessment Techniques in AtoN Design and maintenance** |  | x | x | x | x |  |  |
| 1. **Quality Management** | x | x | x | x |  |  |  |
| 1. **e-Navigation across Committees** | x | x | x | x | x | x | X |
| 1. **Polar Engineering** | x | x | x | x |  |  |  |
| 1. Examine The use of Audible Signals as Aids to Navigation and develop an IALA Guideline on their future. | x | x | x | x | x | x | X |
| 1. **Workshops and Seminars** | x | x | x | x | x | x | X |

**EEP Work Programme 2010-1014 – Details**

This list is not in any order of priority

1. **Knowledge Sharing / Knowledge Management**

Develop procedures for informal sharing of information between members. IALA Reference Library. Develop and populate the IALAWIKI with information on Aids to Navigation (AtoN) not included in official IALA documents.

1. **Engineering – Visual Aids**

Provide f~~urther~~ guidance on vertical divergence of lights, focal plane height, sector lights, daymark design, surface colours, buoy design tools (SW), buoy motion and stability and AtoN maintenance procedures. Guidance on synthetic moorings and optimising mooring design. Consider how to deal with calculation of availability of a system of synchronised lights in the case of a failure of one element. Guidance on mitigating the adverse effect of Sea Bird colonies at AtoN stations and structures.

1. **Visual Perception of lights and daymarks**

Provide guidance on apparent intensity, probability of detection of visual aids, human perception of flickering light, conspicuity of lights, conspicuity of daymarks. Gather conspicuity documents in a suite of documents. CIE Reportership regarding Conspicuity of Lights.

1. **Power Systems and Energy Storage**

Provide guidance on Hybrid power systems, sustainable energy systems, batteries, emerging energy storage systems.

1. **Remote Control and Monitoring**

Provide guidance on Remote Control and Monitoring (RCM) in the e-Navigation architecture, RCM strategies and harmonised protocols.

1. **Environment and safety**

Provide guidance on methods for determining and reducing carbon footprint of AtoN services, handling of mercury in lighthouses, worker safety, treating legionella and coli bacteria in water supplies of destaffed stations. Consequences of global warming in terms of storm events and sea level rising on AtoN provision and maintenance. Update the IALA Green Guide.

1. **Aids to Navigation Training, IALA WWA**

Assist in developing the World Wide Academy, e-training.

1. **Product Certification**

Continue to support the IALA certification scheme. Maintain and develop product certification templates. Consider developing an IALA Product Guide.

1. **Heritage and Conservation**

Maintain the IALA Lighthouse Conservation Manual. Give guidance on the process of transferring redundant lighthouses including site remediation. Selection and display of historic artefacts. Report on case studies. Document history of floating AtoN. Promote an international network for historic lighthouses.

1. **Civil Engineering and Structures**

Revise Lighthouse Maintenance Guidance, give guidance on anti-fouling techniques (marine growth) for floating aids, boat landings, etc., building maintenance and conditioning in low energy environments, low power ventilation systems, avoiding condensation and engineering for natural disasters. AtoN structures in natural disaster areas.

1. **Risk Assessment Techniques in AtoN Design and Maintenance**

~~Give~~ Provide guidance on risk management as an integral part of the provision of aids to navigation services. Framework for determining Total Cost of Ownership of AtoN equipment and systems, investment priorities. Assist in developing the IALA Risk Management Toolbox and ensure that the methods used are standardized and widely accepted.

1. **Quality Management**

Provide guidance on Quality management in Aids to Navigation Engineering, quality assurance of Aids to Navigation services, further work on Key performance indicators.

1. **e-Navigation across Committees**

Develop EEP role in engineering, human factors, system reliability and RCM aspects of e-Navigation. Requirements for physical AtoN in the e-Navigation world. Interfacing visual AtoN to e-Navigation. AIS on AtoN, using binary messages for monitoring AtoN operational status. Modulation of light sources to produce automatic identification and RCM.

1. **Polar Engineering**

Provide guidance on the design of AtoN systems, including aspects of e-Navigation, suitable for the Arctic environment, supporting the opening of new routes in polar waters.

1. **The use of Audible Signals as Aids to Navigation**

Examine the use of Audible Signals as aids to navigation and develop an IALA Guideline on their future. This work will be conducted in conjunction with the ANM Committee.

1. **Workshops and Seminar**
2. IALALITE/IALABATT.
3. Seminar on Heritage, Conservation and Civil Engineering aspects.
4. Workshop on developments in floating aids and associated moorings.
5. Seminar to promote the World Wide Academy.
6. Workshop on Polar engineering aspects (civil engineering, power systems, environment).
7. Seminar on IALA Risk Management Toolbox, with marine incident causation – Annually - IALA
8. Seminar on Model training courses covering different AtoN systems and services (EEP) Promotion of the World Wide Academy - 2013 / 2014
9. Workshop - IALALITE/IALABATT – Norway -2012
10. Seminar on Heritage, Conservation and Civil Engineering aspects late May / early June 2013 – UK / Norway / Greece
11. Workshop on Arctic engineering aspects (civil engineering, power systems, environment) - 2014 – Canada
12. Workshop on Practical aspects of installing e-Navigation infrastructure (future WP?)
13. Workshop on Developments in floating aids and associated moorings – FLOATAID – low priority.
14. Detailed Work Programme (as updated at EEP16)

WG1 – AtoN Design and Maintenance- Chairman: A. Wilkins

Task 8.1 AtoN Engineering

Provide guidance on vertical divergence of lights, focal plane height, sector lights, daymark design, surface colours, buoy design tools (SW), buoy motion and stability and AtoN maintenance procedures.

Guidance on synthetic moorings and optimising mooring design.

Consider how to deal with calculation of availability of a system of synchronised lights in the case of a failure of one element.

Guidance on mitigating the adverse effect of Sea Bird colonies at AtoN stations and structures.

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| **ID** | **Details of work to be undertaken** | **Expected completion** | **Comments** |
| 8.1.1 | Liaise with ANM regarding the availability of synchronised light channels and Revise Guideline 1069 Synchronisation of Lights | EEP17 | The particular concern is the failure of a single light within a group of synchronised lights and the availability consequences. |
| 8.1.2 | Update Guidelines 1006, 1047 and 1066 regarding recent experience with plastic buoys and synthetic moorings and associated cost implications. | EEP19 |  |
| 8.1.3 | A new Guideline on the bird fouling of AtoN structures and means to minimise this problem. | EEP 20 |  |
| 8.1.4 | Revision of Guideline 1021 on lightning protection, to include the disposal of radioactive lightning conductors. | EEP 17 |  |
| 8.1.5 | A new Guideline on the ‘Practical Aspects of Installing AIS AtoN on Buoys and Beacons’ | EEP 21 |  |

Task 8.2 Power Systems and Energy Storage

Provide guidance on Hybrid power systems, sustainable energy systems, batteries, emerging energy storage systems

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| **ID** | **Details of work to be undertaken** | **Expected completion** | **Comments** |
| 8.2 | Revise Guideline 1067-3 Electrical Energy Storage | EEP17 | Input from Korea on Lithium batteries EEP15/8/2 |
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Task 8.3 Remote Control and Monitoring

Provide guidance on Remote Control and Monitoring (RCM) in the e-Navigation architecture, RCM strategies and harmonised protocols.

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| **ID** | **Details of work to be undertaken** | **Expected completion** | **Comments** |
| 8.3 | Liaise with e-NAV regarding the engineering content of A-126 | EEP20 |  |
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Task 8.4 The use of Audible Signals as Aids to Navigation

Examine the use of Audible Signals as aids to navigation and develop an IALA Guideline on their future.  
This work will be conducted in conjunction with the ANM Committee.

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| **Id** | **Details of work to be undertaken** | **Expected completion** | **Comments** |
| 8.4 | Liaise with ANM Committee regarding the future use of audible AtoN signals and consider the preparation of a new Guideline | EEP18 |  |
| 8.4.1 | Consider developing a new Guideline on the installation and operation of audible AtoN signals | EEP20 |  |

Task 8.5 Risk Assessment Techniques in AtoN Design and Maintenance

Provide guidance on risk management as an integral part of the provision of aids to navigation services.

Assist in developing the IALA Risk Management Toolbox and ensure that the methods used are standardized and widely accepted.

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| **Id** | **Details of work to be undertaken** | **Expected completion** | **Comments** |
| 8.5 | Develop new Guideline on risk assessment techniques in AtoN design and maintenance. | EEP19 |  |

Task 8.6 Polar Engineering

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| **Id** | **Details of work to be undertaken** | **Expected completion** | **Comments** |
| 8.6 | Produce new Guidelines on the engineering aspects of AtoN in Polar regions | EEP22 |  |

WG2 – Heritage, Conservation and Civil Engineering - Chairman: B. McIntosh

Task 9 Heritage and Conservation

Maintain the IALA Lighthouse Conservation Manual.

Selection and display of historic artefacts.

Give guidance on the process of transferring redundant lighthouses including site remediation.

Report on case studies.

Document history of floating AtoN.

Promote an international network for historic lighthouses.

| **Id** | **Details of work to be undertaken** | **Expected completion** | **Comments** |
| --- | --- | --- | --- |
| 9.1.1 | Maintain the IALA Lighthouse Conservation Manual   * Update existing chapters * Include additional guidelines from previous session as new chapters * Include additional guidelines from current session as new chapters. * Publish new version 2 on Heritage page on IALA Website | EEP 21 |  |
| 9.1.2 | Produce new guideline on selection and display of historic artefacts   * Provide guidance on the selection and display of historic artefacts on and off the lighthouse * Provide examples of best practise | EEP 17 |  |
| 9.1.3 | Produce new guideline on transfer of redundant lighthouses   * Include site remediation and making the site safe for transfer. * Provide guidance on maintaining safeguards to the heritage value of the lighthouse site as a whole. | EEP 19 |  |
| 9.1.4 | Report on Case Studies  Produce Case Study reports for Nakkehoved and Cabo Mayor Lighthouses projects and post on Heritage website page. Investigate opportunities for additional projects suitable for case studies. | EEP 18 |  |
| 9.1.5 | Document History of Floating Aids to Navigation  Publish booklet on History of Floating Aids to Navigation and post on website | EEP 20 |  |
| 9.1.6 | Re-Issue Questionnaire on Complementary Uses of Historic Lighthouses   * Revise questionnaire to clarify results of previous questionnaire * Include section on knowledge and use of IALA Lighthouse Conservation Manual * Summarise statistics from questionnaire, produce report on results and publish on Heritage page of website * Review work programme on basis of results | EEP 19 |  |
| 9.1.7 | Promote an international network for historic lighthouses.   * Develop an international web link to historic lighthouse documents through the IALA website * Develop Heritage page of IALA Website to allow publication of heritage related documents and to improve availability to other bodies. * Explore with the editor of the IALA Bulletin the possibility of publishing a document on historic light vessels and service vessels worldwide on Heritage website page | ongoing |  |
| 9.1.8 | Subject to Council approval, hold a Seminar on Maintaining Historic Lighthouses – late May / early June 2013 update on problems, solutions for repair and maintenance and the future use of historic lighthouses.   * Agree scope the event * Determine a location and host for the event * Prepare submission for council approval * Organise Seminar | EEP 21 |  |
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Task 9.2 Civil Engineering and Structures

Revise Lighthouse Maintenance Guidance, give guidance on anti-fouling techniques (marine growth) for floating aids, boat landings, etc.

Building maintenance and conditioning in low energy environments, low power ventilation systems, avoiding condensation.

Engineering for natural disasters. AtoN structures in natural disaster areas.

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| **Id** | **Details of work to be undertaken** | **Expected completion** | **Comments** |
| 9.2.1 | Produce guideline on anti-fouling techniques (marine growth) for floating aids, boat landings, etc. | EEP18 |  |
| 9.2.2 | Expand the Guideline on Building maintenance and conditioning in low energy environments and guidance on low power ventilation systems and avoiding condensation.   * Consult with members and other bodies to obtain information on the problems and solutions in their region. * Revise the Guideline to include new information | EEP21 |  |
| 9.2.3 | Provide guidance on protection and repair of Aid to Navigation Structures in Natural Disaster Areas   * Provide information on reinforcement and management of AtoN structures in natural disaster areas, time permitting, in the context of * Reinforcement of lighthouses in natural disaster-prone areas * Management of earthquake/tsunami damaged structures * Take natural disasters into account, when designing new constructions * Possible addition to the NAVGUIDE or Conservation Manual | EEP 20 |  |
| 9.2.4 | Revise Lighthouse Maintenance Guidance   * Identify relevant Guidelines * Update existing Guidelines with respect to Lighthouse Maintenance * Develop new Guidelines to complete the required information | EEP 21 |  |
|  |  |  |  |

WG3 – Environment, Quality Assurance and Publications - Chairman: W. Danzik (D. Jeffkins)

Task 10.1 Environment and Safety

Provide guidance on methods for determining and reducing carbon footprint of AtoN services, handling of mercury in lighthouses, worker safety, treating legionella and coli bacteria in water supplies of destaffed stations.  
Consequences of global warming in terms of storm events and sea level rising on AtoN provision and maintenance.  
Update the IALA Green Guide.

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| **Id** | **Details of work to be undertaken** | **Expected completion** | **Comments** |
| 10.1.1 | Develop new Guideline on methods for determining and reducing carbon footprint of AtoN services. | EEP18 |  |
| 10.1.2 | Revise NAVGUIDE content for guidance on safe handling and management of mercury. | EEP17 |  |
| 10.1.3 | Develop new Guideline on development of safety management for aton activities | EEP18 |  |
| 10.1.4 | Develop new Guideline on treating legionella and coli bacteria in water supplies of destaffed stations. | EEP17 |  |
| 10.1.5 | Revise Guideline 1036 IALA Green Guide | EEP20 |  |

Task 10.2 Product Certification

Continue to support the IALA certification scheme.

Maintain and develop product certification templates.

Consider developing an IALA Product Guide.

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| **Id** | **Details of work to be undertaken** | **Expected completion** | **Comments** |
| 10.2.1 | Maintain and develop product certification templates | EEP21 |  |
| 10.2.2 | Develop IALA product guide database schema | EEP18 |  |
| 10.2.3 | Develop new Guideline and XML schema for AtoN product data exchange | EEP17 |  |

Task 10.3 Quality Management

Provide guidance on Quality management in Aids to Navigation Engineering, quality assurance of Aids to Navigation services

Further work on Key performance indicators.

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| **Id** | **Details of work to be undertaken** | **Expected completion** | **Comments** |
| 10.3.1 | Contribute to the review of Recommendation 0-132 on quality management for aids to navigation authorities | EEP20 |  |
| 10.3.2 | Review Guideline 1052 on quality management in aids to navigation service delivery | EEP21 |  |
| 10.3.3 | Review NAVGUIDE | EEP21 |  |

Task 10.4 Aids to Navigation Training

Assist in developing the World Wide Academy, e-training.

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| **Id** | **Details of work to be undertaken** | **Expected completion** | **Comments** |
| 10.4.1 | Develop new Guideline for the Accreditation of Level 1 AtoN Training | EEP18 |  |
| 10.4.2 | Develop model courses for Level 2 Technician Training | EEP21 |  |

WG4 – Light and Vision - Chairman: S. Doyle (P. Kelly)

Task 11.1 Visual Perception of Lights and Daymarks

Provide guidance on apparent intensity, probability of detection of visual aids, human perception of flickering light, conspicuity of lights, conspicuity of daymarks.

Gather conspicuity documents in a suite of documents.

CIE Reportership regarding Conspicuity of Lights.

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| **Id** | **Details of work to be undertaken** | **Expected completion** | **Comments** |
| 11.1.1 | Continue the development of Draft Guideline 1073 | EEP16 | This document has been re formatted to improve the logic of the document and improve navigation around it. The contents of the document demand further input. |
| 11.1.2 | Develop new guideline on “Daymarks for Aids to Navigation” | EEP17 | This work was to be focussed on “Daymarks for floating AtoN” but was suggested by the task group to have a wider scope. This was accepted by EEP chair. |
| 11.1.3 | Develop guidance on the degradation of LED light sources | EEP17 | This work, led by Aivar Usk will incorporate information into the guideline regarding the degradation of LED light sources over time and offer methods of measurement to monitor the gradual decrease in luminous output. There remains the possibility of this document being incorporated in a suite of documents which may include 1073 |

1. Developments in Lighthouse Conservation

A key objective of WG2 is the sharing of information in regards to Lighthouse Conservation initiatives within member countries. The following is a summary report provided at EEP15.

**Australia**

AMSA continues to place high importance on maintaining and utilising its historic buildings.

The following upgrade work has commenced or been completed;

* North Reef, Great Barrier Reef, Queensland (1878) - Successful tender was announced in September 2010. The lighthouse is unique in Australia as it was built before the island existed using a caisson system, over time the island formed around the light. It is also the largest of the timber framed iron clad lights in the AMSA network. The site will be visited by the AMSA Heritage Officer in October 2010 to assess works required on the Chance lantern room as part of the refurbishment program.
* Cape Nelson, Victoria (1884) is the first rotating heritage lens converted to low voltage in the AMSA network. In October the work was completed and the conversion has been a success paving the way for other conversions at AMSA heritage sites.

Official lighthouse openings – Table Cape lighthouse (1888) in Tasmania officially opened as the 13th public accessible lighthouse in the AMSA network. Major upgrade works sympathetic to the sites heritage values were undertaken throughout 2010. These works included relocation of the AIS system to the sub basement and building code compliance alterations. Tours will be conducted on demand by the successful licensee and it is expected to become a major tourist icon in Northern Tasmania and employ 10 part time and 1 full time staff members.

The offshore lighthouse at South Solitary Island was opened for visitors in July 2010; the island is only accessible by helicopter. Tours were run by staff of the Navigation Safety section of AMSA and were fully booked. The 80 visitors paid $400 AUD each for the tours with all proceeds going to charity.

A member of AMSA will attend King Island in Bass Strait, Tasmania in December to discuss the opening of the Cape Wickham light for its 150th anniversary planned for 2011. Discussions will take place between all stakeholders with the final decision being an assessment for suitability of access. The lighthouse is an icon for the 2500 island residents and is the tallest light in Australia with 222 steps to the top. Coinciding with this event will be the return of the original 1st Order Chance lens to the islands museum with the assistance of AMSA.

AtoN artefacts update - work continues on cataloguing the artefacts loaned to other institutions with a number of audits carried out. Deeds of Gift have been completed for permanent transfer of objects to the National Maritime Museum. All loans in the State of New South Wales have now been accounted for and updated Loan Agreements issued.

A number of artefacts including lens' ranging from 3rd to 4th order have been returned from the National Trust in Victoria and are being readied for display at AMSA HQ. The new AMSA offsite artefacts store is currently being fitted out and when complete will be the repository for the AMSA Heritage Collection.

Digitising of the AMSA employment (ex light keepers) and photographic records continues as part of a project between AMSA and the non profit group Lighthouses of Australia.

A member of AMSA will attend the South Australian Maritime Heritage seminar in Adelaide in late October and present on AMSA' South Australian heritage listed lighthouses.

**Norway**

The coastal administration is now making maintenance plans for all the protected/listed lighthouses that are still owned by the state (64 in total). In relation to this, the Lighthouse Museum network will make information plans for the protected lighthouses, providing a proposal for an official design and presentation of lighthouse history to the public.

In 2010 a new book was published by the Lighthouse Museum and the Lighthouse Authorities presenting interviews with old lighthouse workers, focusing on the post WW2 period and the rebuilding of the lighthouses in the north of Norway.

The Lighthouse Museum network and the Coastal Administration is working together on a project with geo-tagging of historical information on maritime infrastructure and the maritime cultural landscape. The aim is to make the information accessible on the Coastal administrations home page – Kyst-info.

The Lighthouse Museum at Lindesnes has been challenged by the Ministry of Fishing and Coastal Affairs to take on the administration and management of a national celebration of maritime culture called “Kystens Dag” (The day of the coast). This year the main celebration took place in Oslo on June 12th.

In 2014 there will be a national celebration of Norwegian independence, and several museums and governmental bodies are working with plans to make this a celebration of Norwegian maritime culture. One of the bigger projects is to make a television series in 12 episodes, inspired by the BBC “Coast” series.

In the spring 2011 a workshop will be held on the challenges of new light sources and old lenses, taking up on the presentation made at the IALA workshop in Santander.

**Spain**

On June 27th 2009, the World Heritage Committee, has inscribed a Spanish lighthouse, The Tower of Hercules in La Coruña, on the World Heritage List.

The Tower of Hercules has served as a lighthouse and landmark at the entrance of La Coruña harbour in north-western Spain since the late 1st century A.D. when the Romans built the Farum Brigantium. The Tower, built on a 57 metre high rock, rises a further 55 metres, of which 34 metres correspond to the Roman masonry and 21 meters to the restoration directed by architect Eustaquio Giannini in the 18th century, who augmented the Roman core with two octagonal forms. Immediately adjacent to the base of the Tower, is a small rectangular Roman building. The site also features a sculpture park, the Monte dos Bicos rock carvings from the Iron Age and a Muslim cemetery. The Roman foundations of the building were revealed in excavations conducted in the 1990s.

The Tower of Hercules is the only fully preserved Roman lighthouse that is still used for maritime signaling, hence it is testimony to the elaborate system of navigation in antiquity and it provides an understanding of the Atlantic sea route in Western Europe. The Tower of Hercules was restored in the 18th century in an exemplary manner, which has protected the central core of the original Roman monument while restoring its technical functions.

The Tower of Hercules is testimony to the use of lighthouses in antiquity. The Tower is also proof of the continuity of the Atlantic route from when it was first organised by the Romans, during a large part of the Middle Ages, and through to its considerable development in the modern and contemporary eras.

**Sweden**

What has happen concerning Lighthouse disposal during the last year!

A couple of years ago the National Property Board, on commission by the Government, began to carry out an investigation of all state properties including AtoN’s, which shall be preserved in the long-term by the state. The report shall be presented in December. SMA has principally investigated lighthouses and beacons which are declared or are planned to be declared as a historic building. As the AtoN’s are under investigation SMA are prevented from phasing out these AtoN’s.

SMA have an agreement to co-operate with and meet the Swedish Lighthouse association about 4 times/year over some Lighthouse/beacons objects. Among these objects two Lighthouses Huvudskär and Väderöbod have found new owners. In total SMA dispose of about 10 Lighthouses/beacons per year.

A working party has been created for the preservation of unlighted beacons on the West coast and in the great lake Vänern. Within this frame work SMA have made the nautical assessment which show that only 15-20 % of these old seamarks have a meaning for the users today. We are now starting to create an interest in these municipalities to take over the redundant unlighted beacons many of which are very old. In total SMA are responsible for 2000 different types of unlit seamarks, 500 of them are older than 1940.

1. IEC Standards

The specific standards mentioned by Aivar Usk (section 5.3) are:

Project IEC 62305-1 ed2.0 (2010-09)

<<http://webstore.iec.ch/webstore/webstore.nsf/ArtNum_PK/9999981370?OpenDocument&mlref=JP>>

Protection against lightning – Part 1: General principles

ICS code 29.020, 91.120.40 TC 81 CHF 360.

Project IEC 62305-2 ed2.0 (2010-09)

<<http://webstore.iec.ch/webstore/webstore.nsf/ArtNum_PK/9999981371?OpenDocument&mlref=JP>>

Protection against lightning – Part 2: Risk management

ICS code 29.020, 91.120.40 TC 81 CHF 375.

Project IEC 62305-3 ed2.0 (2010-09)

<<http://webstore.iec.ch/webstore/webstore.nsf/ArtNum_PK/9999981372?OpenDocument&mlref=JP>>

Protection against lightning – Part 3: Physical damage to structure and life hazard

ICS code 29.020, 91.120.40 TC 81 CHF 405.

Project IEC 62305-4 ed2.0 (2010-09)

<<http://webstore.iec.ch/webstore/webstore.nsf/ArtNum_PK/9999981373?OpenDocument&mlref=JP>>

Protection against lightning – Part 4: Electrical and electronic systems within structures

ICS code 29.020, 91.120.40 TC 81 CHF 375.

Project IEC 62561-4 ed1.0 (2010-09)

<<http://webstore.iec.ch/webstore/webstore.nsf/ArtNum_PK/9999981369?OpenDocument&mlref=JP>>

Lightning protection system components (LPSC) – Part 4: Requirements for conductor fasteners

ICS code 29.020, 91.120.40 TC 81 CHF 158.

Project IEC 62660-1 ed1.0 (2010-09)

<<http://webstore.iec.ch/webstore/webstore.nsf/ArtNum_PK/9999921728?OpenDocument&mlref=JP>>

Secondary lithium-ion cells for the propulsion of electric road vehicles – Part 1: Performance testing

ICS code 29.220.20, 43.120 TC 21 CHF 248.

Project IEC 62660-2 ed1.0 (2010-09)

<<http://webstore.iec.ch/webstore/webstore.nsf/ArtNum_PK/9999921727?OpenDocument&mlref=JP>>

Secondary lithium-ion cells for the propulsion of electric road vehicles – Part 2: Reliability and abuse testing

ICS code 29.220.20, 43.120 TC 21 CHF 158.