

**Report of the 21st Session of the IALA EEP Committee**

**7 to 11 October 2013**

***Executive Summary***

* 51 members from 22 countries attended this meeting of the EEP Committee; 6 members attended for the first time; and 1 observer;
* the Committee considered 69 input papers;
* the Committee produced 22 output documents, including:
  + a draft Guideline on Providing AtoN services in Polar Regions;
  + a draft Guideline 1006 Ed3 Plastic Buoys Update;
  + a draft Guideline 1015 Ed2 1 Painting Aids to Navigation Buoys;
  + a draft Guideline on Theft and Vandalism Deterrents;
  + a draft IALA Guideline 1036 on Environmental Management;
  + a draft Guideline 1065 on Vertical Divergence Ed2;
  + an Information document on Calmar Software on Mooring Calculation Software;
  + 8 Level 2 WWA Model courses, 1 Level 1 WWA Model course and a Level 2 overview;
  + 3 Liaison Notes;
* a workshop on the Challenges of Arctic AtoN Provision was hosted in Greenland by the Danish Maritime Authority from 30 September – 4 October, 2013 and produced a draft Guideline on Providing AtoN Services in Polar Regions;
* a seminar on the subject of the Preservation of Lighthouse Heritage was held in Piraeus, Greece between 3 and 7 June 2013;
* Omar Frits Eriksson and Christian Lagerwall were approved as IALA endorsed experts;
* The Work Programme for 2014-2018 was updated (EEP21-14.1.12).

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| EEP Committee  21st Session | 11 October 2013 |

**Report of the 21st Session of the IALA EEP Committee**

# Opening

The 21st meeting of the Engineering, Environment and Preservation of Historic Lighthouses (EEP) Committee was held from 7 to 11 October 2013 at IALA. The Chairman was Ómar Frits Eriksson the Vice Chairman was David Jeffkins. The Secretary for the meeting was Seamus Doyle.

The Chairman welcomed all participants to the Committee meeting, especially those attending for the first time. He noted that the session would be a busy week in view of this being the final session of the work period.

He then introduced the Deputy Secretary-General, Mike Card, who apologised for the absence of the Secretary-General. Mike Card added his welcome to everyone. He noted that EEP21 was the final meeting of the current Work Programme, which ends with the 2014 Conference. He remarked that planning is well in hand for establishing a strategic plan for IALA, which is aimed at covering the next three Work Periods (2014 – 2026). In this respect, he asked that anyone who felt that they had an input to such planning should contact the Chairman, who would be participating in a strategy meeting at the end of the month prior to PAP26. He referred to the upcoming meeting of the LAP in Denmark to consider the proposed IALA change of status from a French charity to an International Governmental Organisation. He encouraged delegates to take copies of a brochure describing the proposal as well as a copy of the IALA Report. He wished the Committee a successful and productive week.

Individual Committee members were then asked to introduce themselves.

## Approval of the Agenda

The agenda at EEP21-1.2 rev2 was approved.

## Programme for the week

EEP21-1.4 refers.

The Chairman ran through the plan for the week, including the social programme.

## Administrative Announcements

Virginia Butler gave details on safety and administrative matters.

# Review of action items from EEP20

Input paper EEP21-2 refers. Action items for the IALA Secretariat from EEP20 were reviewed and noted as complete.

Paper EEP20/7 (on inclinometers) had been converted into an Information Paper and posted on the IALA Wiki.

# Review of input papers

EEP21-3 rev11 refers.

The Chairman reviewed the list of input papers, asking those authors who wished to introduce their papers to do so.

The Chairman noted that input papers were available on the IALA website and emphasised the importance of using the input paper template provided, before thanking the Committee members for the effort in providing the input papers and the level of inter-sessional work that they represented. It was noted that the ialashare ftp server was available for Working Group documents and as a method of submitting Output and Working documents.

# Reports from other bodies

## IALA Council 55th Session (May 2013)

EEP21-4.1 refers.

The meeting noted:

* Draft Guidance documents and workshop proposals from the EEP Committee were approved;
* the proposal for a workshop on the challenges of providing AtoN in Polar regions was approved;
* 10 WWA Model Courses were endorsed;
* The WWA’s list of IALA experts was endorsed.

## PAP25 (May 2013)

EEP21-4.2 refers.

The Committee noted:

* the request to the EEP Committee to finalise the historic lighthouse template and then use it to commence populating an historic lighthouse database (WG2);
* the EEP report to PAP 25 covering an application which was being made to C55 for a Polar Engineering workshop, the future Work programme, the identification of a new topic on vandalism and theft, the suggestion of a zero maintenance concept, and the discussion about the role of heritage within IALA;
* that good progress had been made with respect to WWA model courses, with the remaining eight planned courses expected to be finalised at EEP21;
* that all Tasks are expected to be complete at EEP21;

Action Item

The Chair/ Vice Chair are requested to review the action to finalise the historic lighthouse template and its application to commence populating an historic lighthouse database and add to the 2014-2018 Work Programme if required.

## IMO MSC92 (June 2013)

EEP21-4.3.4 with EEP21-4.3.1, EEP21-4.3.2, EEP21-4.3.3 refer.

The Committee noted

* the good working relationship between IALA and IMO;
* the Sub-Committees in the new MSC structure, starting from the 2014-2015 biennium;
* the merging of the present “NAV” and “COMSAR” Sub-Committees, to become the new Sub-Committee on Navigation, Communications, Search and Rescue (NCSR);
* the importance of cooperation between IALA and IMO.

## IMO NAV59 (September 2013)

The Committee noted

* The ship tunnel project in Norway;
* Sea traffic management in Sweden;
* The DMA Maritime Cloud project in Denmark to create a logical universe, tying all entities together world wide, creating a type of Maritime Internet. VDE forms a corner stone for this concept;
* The Maritime Cloud demonstrator running as a testbed in open source software which was well received by NAV.

# Reports from Rapporteurs

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

EEP21-5.1 refers.

Adrian Wilkins reported on new hydrogen and methanol fuel cells costing approximately ₤2000 per unit and non poisonous anti-fouling paint with “furry” finish that were now available commercially.

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

There was nothing to report.

## Developments in Battery Technology (M3\*)

Jonas Lindberg reported that technical developments are occurring in Nickel Metal Hydride batteries and that a new Lead Crystal battery capable of 100% discharge and producing 10 times less gas are coming.

Sipke Hoekstra provided four reports on lead crystal batteries (input papers EEP21-5.3.1, EEP21.5.3.2, EEP21-5.3.3, EEP21-5.3.4).

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

Malcolm Nicholson presented a report on developments in new light sources (input paper EEP21-5.4 refers). He reported that the GLA R&RNav LED light source was capable of providing 17NM light in a 3rd order lens and 12NM lights are in service already.

## IALA Certification Process (M5\*) (Discontinued after C52)

## CIE-IALA Liaison (M6\*)

There was nothing to report, due to no CIE meeting.

## IALA Dictionary (M7\*)

Omar Frits Eriksson reported that there were no changes to report but he urged the Committee to use the Dictionary.

## Developments in AIS AtoN (M8\*)

There was nothing to report.

# Presentations

Five presentations were made during the opening plenary session and one video was shown. The associated PowerPoint files are available on the IALA Committee website.

## IALA World-Wide Academy (WWA) – Stephen Bennett

In his presentation Stephen Bennett reminded delegates that there were 78 developing nations that were targets for the capacity building efforts of the World Wide Academy working closely with the International Maritime Organization and the International Hydrographic Organization under the United Nations “Delivering as One” initiative. He then briefed delegates on the range of model courses being developed by Committees, focussing on the input papers to EEP21. These included a new Level 1 Manager model course on an introduction to e-Navigation which had been output from e-Nav14, a new Guideline on Train the Trainer from VTS-37 and the final seven or eight Level 2 Technician model courses to be considered by Working Group 3. He invited EEP Members with French/English, Spanish/English, Arabic/English language skills to register as heritage experts. He finished by reminding the Committee that the Academy would be delivering a one month Level 1 AtoN Manager course to 24 participants in Saint Germain en Laye in March 2014.

## Investigation into Development of AtoN Simulator in Korea – Dr. FANG, Tae Hyun

The presentation, prepared by Dr. Tae Hyun Fang of the Korean Institute of Ocean Science and Technology (KIOST) from Korea, introduced the national research project about “Development of AtoN Simulator in Korea”. The presentation covered the underlying systems to be developed including the integrated system design, the construction of AtoN database, the operational software, and the implementation of the integrated systems, the specific features in the AtoN simulator, and the compliance with IALA Guideline 1097. The presentation ended with a summary of the applications, the expected impacts, and the future tasks. In future tasks, it was suggested that the AtoN simulator would be an item of an AtoN Accountability toolbox for the future work programme and the Ministry of Ocean and Fisheries (MOF) of Korea and the Korea Association of Aids to Navigation (Jong Uk Kim) will provide information about operational systems for AtoN simulation in Korea to the next meeting.

In the discussion Dr Fang indicated that he could make enquiries regarding the possible availability of the simulator to the WWA.

Action Item

Jong Uk Kim is requested to keep the Committee informed of progress with the AtoN simulator and act as Rapporteur on simulation techniques.

Jong Uk Kim is requested to make enquiries re the possible availability of the simulator to the IALA WWA.

The Secretariat is requested to add an agenda item to the agenda for EEP22 for a Rapporteur report from Dr Fang on monitoring developments of simulation techniques.

## Aids to Navigation on demand Fog Lights – Aivar Usk

Aivar Usk made a presentation on a recent e-Navigation project to develop a system of AtoN fog lights for lateral marking of the narrow passage between the rocks at the approach to Sandvikvåg ferry terminal in Norway which was completed recently by Cybernetica AS. More conspicuous lateral marking of the passageway was required in order to improve safety of navigation for passenger ferries in foggy conditions which are frequently encountered in that area. A 30m long visibility testing range, featuring a large particle high pressure atomized water mist environment, was built at Cybernetica to test the proposed highly conspicuous double pulsed fixed and flashing rhythmic Fl(2) character of 0.2+0.1+0.2+0.5 sec with red and green lights flashed in opposite phase. A password protected Internet based remote control system with user tracking was established to operate the fog lights as occasional AtoN-on-Demand lights in reduced visibility for ferry navigators using smartphones. In addition, the indirectly illuminated marks for high speed vessels (High Speed Indirect Lighting - HIB) AtoN mounted on poles fixed in the seabed, that are hosting the fog lights, are monitored for collisions by telematics modules in the system, allowing vibration measurement to be carried out on demand. Although the system was only deployed in September 2013 and first activations in real fog occurred in October, initial feedback received from the users has been positive.

A discussion on propagation of light signals in fog followed, concluding that Rayleigh scattering is insignificant at short distances in marine fog conditions and the statement on near wavelength independent attenuation in the presentation is valid.

Monochromatic light is best for fog conditions. Because sea fog particles are typically 10 – 30 micron diameter, while land fog particle size is less than 1 micron, light is scattered in sea fog and is therefore difficult to penetrate, requiring a lot of power to enable identification of the light source.

A question regarding availability of such fog lights at this location to mariners other than professional ferry operators was answered by expressing an expectation that once activated by the scheduled ferry navigators, the light signals would be available to all mariners in the area.

## Traditional Revolving Optic Re-engineered for Continued Operation without Mercury, Jørgen Royal Petersen

In 2008 The Danish Maritime Safety Administration (DaMSA), now the Danish Maritime Authority (DMA) had thirteen (13) operational lighthouses with mercury bath system. Spillages of mercury at Nakkehoved lighthouse caused by an earthquake in Sweden in December 2008 tightened up the focus of the Environmental Authorities on the use of mercury at Danish Lighthouses. Due to the environmental impact it was decided to close down all mercury bath systems before 2015, employing either high intensity LED flashing lanterns with a range of approximately 18 NM range or preserving the revolving optic.

In co-operation with The Technical University of Denmark (DTU) the revolving system at Nakkehoved Lighthouse (lighthouse museum and listed lighthouse) was reengineered between January and April 2013 following approval by the Danish Agency for Culture. The major aim was to avoid significant changes of the original construction and preserve the authenticity of the unique installation at an operational lighthouse. The system has worked satisfactorily for 6 months since commissioning and a similar project at three other lighthouses is planned by the end of 2013.

In discussion, it was noted that there was a 17% reduction in energy required to rotate the optic with the new bearing but it was not known if there were drag factors in the mercury bath such as detached shellac coating that increased energy requirement prior to conversion.

## Acrylic Glazing for Lighthouses, Simon Millyard

The presentation looked at the use of Acrylic as an alternative to glass in lantern room glazing. Acrylic has many advantages over glass in Health & Safety, weight, cost and light transmission properties, though its longevity is not as yet proven. Light transmission properties of an acrylic glazing pane after 6 years use in service show that its performance has not degraded over time. Overall, the presentation suggested the use of Acrylic as an alternative to glass to be used to replace broken panes as part of an on-going repair programme.

In discussion it was noted that some Members had used polycarbonate for lantern glazing with success over 25 years but with up to 90% light loss at the end of the period. Polycarbonate front covers on range lights are replaced at 10 year intervals. 30% degradation in transmissivity was noted for range lights facing the sun with much less for more shaded panels. Lexan XL was considered to be satisfactory for 10 years. In some areas plastic had turned grey but modern plastics have much better UV tolerance.

Acrylic has been used for lantern glazing in Sweden for 40 years and found to operate satisfactorily for 20 years.

In the Middle East, extreme UV effects can be expected and it was suggested that the test be repeated in Oman.

## Anti-fouling video – Mariano Marpegan

The video showed the cleaning by hand and by pressure washer, of a buoy after 3 years on station, indicating a highly effective anti-fouling paint. The paint is in the “slippery anti-fouling” category.

In discussion, it was stated that the anti-fouling paint is cleaned of marine growth annually and reapplied every 3-5 years. Consequently the only maintenance task on the buoy structure is to clean the non submerged buoy structure with water jet annually.

## Renovation of Le Cabon beacon, Brittany

Nicolas Fady introduced a video on the renovation of the stone beacon at Le Cabon, Brittany, using ultra high performance fibre reinforcement concrete (UHPFRC).

## LinkedIn

Omar Frits Eriksson demonstrated the IALA LinkedIn group on-line and pointed out that there are now 769 members. It was noted that a number of sub-groups have already been set up, such as the VDES group coordinated by Peggy Browning and the e-Nav test bed coordinated by Steve Burrows.

## IALA Wiki

Because of attacks by hackers, access has been restricted to registered users. All Members were invited to email Omar Frits Eriksson, stating preferred user name and password, for an account if they wished access to the IALA Wiki.

# Establish Working Groups

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

|  |  |
| --- | --- |
| Working Group | Working Group Chair |
| WG1 AtoN infrastructure design and maintenance | Adrian Wilkins |
| WG2 Heritage, conservation and civil engineering | Bob McIntosh |
| WG3 Environment, quality assurance, training and publications | David Jeffkins |
| WG4 Light and vision | Malcolm Nicholson |

It was agreed that WGs 1 and 2 would meet on Tuesday, WGs 3 & 4 on Wednesday; although a subgroup of WG4 would meet on Tuesday and WG1 work may extend into Wednesday. It was agreed that the plenary review of output documents and the reports from Working Group Chairmen may start at 0900 on the Thursday.

# Working Group 1 – AtoN InfrastRuctUre Design & Maintenance

Working Group 1 was asked to respond to input papers EEP21-8.1.1, EEP21-8.1.2, EEP21-8.1.3, EEP21-8.1.4, EEP21-8.1.5, EEP21-8.1.6, EEP21-8.5, EEP21-8.5.1, EEP21-8.5.2, EEP21-8.5.3, EEP21-8.5.4, EEP21-8.6, EEP21-8.6.1, EEP21-8.6.2, EEP21-8.7.

## AtoN Engineering (Task 2\*)

### Update Guidelines 1006, 1047 regarding recent experience with plastic buoys and associate cost implications. (Activity 2.1.1)

Considerable information has been collected on the international population of plastic buoys and a video covering many aspects of plastic buoy maintenance and repair was provided by Sipke Hoekstra. However this will not fit into the existing guideline structure and the Committee proposes that the video and data from the questionnaire should be stored on the IALA Wiki with a view to providing new plastic buoy guidelines in the next work period.

During the review of Guideline 1006 it was noted that in pages 4,6,7,8 and 9 there are references to Guideline 1040 and these have been replaced by reference to Guideline 1077. The guideline has been amended and included as EEP21-14.1.1.3.

Action Items

The Secretariat is requested to upload the video provided by Sipke Hoekstra and the statistical information regarding plastic buoys provided by Jorg Unterderweide to the IALA Wiki web site.

The Secretariat is requested to forward EEP21-14.1.1.3 to Council for approval.

### Information video on the Hydrostatic Design of Buoys as an AtoN Platform. (Activity 2.1.4)

A video on testing the stability of buoys from the workshop in Brest has been provided by CETMEF. The working group consider that it would be useful to store this valuable information on the IALA Wiki web site.

Action Items

The Secretariat is requested to upload the CETMEF video on testing the stability of buoys from the Brest workshop to the IALA Wiki web site.

### Antifouling section update for guideline 1015 (Agenda Item 8.1.1)

Input papers EEP21-8.1.1 and EEP21-8.1.4 were considered.

Additional information has been provided by Argentina during EEP21 and has been incorporated into Guideline 1015. An amended version of Guideline 1015 is included as EEP21-14.1.1.4.

Action Items

The Secretariat is requested to forward the Amended Guideline on Painting Aid to Navigation Buoys (EEP21-14.1.1.4) for Council approval.

### Draft Guideline on Theft and Vandalism Deterrents (Agenda Item 8.1.2)

Input paper EEP21-8.1.2 on Theft and Vandalism Deterrents has been updated and output as a draft Guideline (EEP21-14.1.1.5) for approval by Council.

Action Items

The Secretariat is requested to forward the draft Guideline on Theft and Vandalism Deterrents (EEP21-14.1.1.5) to the IALA Council for approval.

### Liaison Note from ANM on Disaster Recovery (Agenda Item 8.1.3)

Input papers EEP21-8.1.3 and EEP21-8.1.5 were considered.

The Committee noted the ANM Committee’s intention to include Disaster Recovery in its 2014 - 2018 Work Programme and take the lead on its development.

### Buoy mooring design software.

Following inter sessional work on the Mobilis mooring design software, the Committee thanked Mobilis for their attendance and assistance in the preparation of the output paper on the use of this software as well as authorisation for IALA to promote and use the software.

Action Items

Adrian Wilkins is requested to liaise with Mobilis to finalise the updating of the Mobilis buoy mooring design software to v1.0 by Christmas 2013.

Following updating by Mobilis, the Secretariat is requested to arrange to make the buoy mooring design software available to IALA members.

The Secretariat is requested to make document EEP21-14.1.1.2 on the use of Mobilis buoy mooring design software available on the Wiki.

Peter Dobson is requested to provide a real-life step-by-step example of generating a Calmar model from an existing design using the Mobilis buoy mooring design software to Adrian Wilkins for inclusion in the buoy mooring design software manual (EEP21-14.1.1.2) by Christmas 2013.

Jorg Unterderweide is requested to translate the menu and user manual for the Mobilis buoy mooring design software into German and forward to Adrian Wilkins for inclusion in the buoy mooring design software manual (EEP21-14.1.1.2) by Christmas 2013.

Shaheen Mirza is requested to translate the menu and user manual for the Mobilis buoy mooring design software into Arabic and forward to Adrian Wilkins for inclusion in the buoy mooring design software manual (EEP21-14.1.1.2) by Christmas 2013 .

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

This task was completed at EEP16.

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

No work was carried out on this task at EEP21.

## ****Risk Assessment Techniques in AtoN Design and Maintenance (Task11\*)****

This task was completed at EEP20. The Risk Assessment Techniques in AtoN Design and Maintenance document has been placed on the Wiki.

## S100 Data Classification and Encoding Guide (Task 13\*)

Activity 13.3.2 and agenda Item 8.5 refers.

The Committee noted the information contained in the documents on the S100 system and the Common Shore- based System Architecture.

* IALA Recommendation on the IALA Common Shore-based System Architecture (CSSA) 20130925b (Input paper EEP21-8.5.1);
* Draft Revision Of Rec e-NAV-140 on e-Navigation Architecture-Shore Perspective (Ed2) (Input paper EEP21-8.5.2);
* Liaison note from e-NAV to committees and PAP re S100 PS (Input paper EEP21-8.5.3).

Action Item

Committee Members are requested to review the e-Navigation information on S100 Data Classification and Encoding Guide which will be important for future electronic data transfer regarding all Aids to Navigation and submit comments to EEP22.

### Information Paper on Technical Guidelines for implementation of VDES

Input paper EEP21-8.5.4 refers. The Committee noted the extensive information provided regarding the operation of new data exchange methodologies via VHF radio channels and possible consequential requirements of multiple aerials.

## Polar Engineering (Task 14\*)

Input paper EEP21-8.6.1 (Activity 14.1.1) refers.

The draft Guideline on AtoN Services in Polar regions draft v10 from the IALA Workshop on the Challenges of Providing AtoN Services in Polar Regions was reviewed and completed for submission to Council.

Action Item

The Secretariat is requested to forward the draft Guideline on AtoN Services in Polar regions (EEP21-14.1.1.1) to the IALA Council for approval.

Jorgen Royal Petersen is requested to convert the spreadsheet for solar sizing in Polar regions to English and provide to the IALA Secretariat for the use ofIALA Members.

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

Work on this Task was completed at EEP15.

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

Completed at EEP21.

# Working Group 2 – Heritage, Conservation & Civil Engineering

The Committee was asked to respond to input papers EEP21-9.1.1, EEP21-9.1.2, EEP21-9.1.3, EEP21- 9.1.4 and EEP21-9.3.1.

The Chairman welcomed all attendees to the working group and in particular to any new members of the group.

## Heritage and Conservation (Task 9\*)

### Maintain the IALA Lighthouse Conservation Manual (Activity 9.1.1)

A short discussion took place on the future of the Conservation Manual. The review of the manual and the additional guidelines published since 2006 will form an important part of the future work programme for the next work period 2014-2018. This should allow the publication of a revised version of the manual but certainly will provide for an electronic copy published on the website.

Malcolm Nicholson has produced a list of all Guidelines, Recommendations and Manuals that are currently under the auspices of the EEP Committee. This will allow easier tracking of the Working Group documents.

The following have been agreed as those allocated to Working Group 2. A programme for review will be included in the future work programme.

1063 On Agreements for Complementary use of Lighthouses Dec-08 Ed 1

1074 On Branding and Marketing of Historic Lighthouses Dec-09 Ed 1

1075 On a Business Plan for the complementary use of a Historic Lighthouse Dec-09 Ed 1

1076 On Building Conditioning of Lighthouses Dec-09 Ed 1

1080 On The Selection and Display of Heritage Artefacts Dec-11 Ed 1

1093 on the Management of Surplus Lighthouse Property Dec-12 Ed 1

IALA Lighthouse Conservation Manual May-06 Ed 1

Information Paper on Definitions on Conservation Dec-08 Ed 1

The following link is to the Guidelines section of the IALA website where the guidelines listed above can be found. [http://www.iala-aism.org/publications/](http://www.iala-aism.org/iala/publications/publications.php?LeTypePub=2)

### Produce a new guideline on the selection and display of historic artefacts (Activity 9.2.1)

IALA Guideline No. 1080 on the Selection and Display of Heritage Artefacts has now been published on the IALA website and is available for members to download. This item is complete.

### Produce new guideline on transfer of redundant lighthouses (Activity 9.3.1)

IALA Guideline No. 1093 on the Management of Surplus Lighthouse Property has now been published on the IALA website and is available for members to download. This item is complete.

### Report on Case Studies (Activities 9.4.1 & 9.4.2)

The information previously collected on the Case Study reports for the group visit to the project at Nakkehoved Lighthouse near Copenhagen has now been added to the IALA Wiki to make it available to IALA members. The working group continues to hope that when further Case Study reports are published that it will be possible to publish these on the Heritage page of the IALA website. This item is now considered to be complete until further Case Study reports become available. Interested members should contact EEP Committee Chairman to create an account.

### Document the History of Floating Aids to Navigation (Activities 9.5.1 & 9.5.2)

Adrian Wilkins produced a finalised version of the book including appendices at the meeting and this is considered as a final version which can be given to a publisher to be prepared for printing. Final copy is available from Adrian Wilkins.

IALA are now considering options for publishing the document in book form, hopefully in time for the IALA Conference in May 2014. IALA Secretariat are requested to investigate the possibilities of publishing the document, with budget costs for layout and printing and to produce a proposal for it to be available at the 2014 Conference. The Norwegian Lighthouse Museum have also offered to investigate to possibility of publishing the document and distributing through their Museum Network.

Action Items

The IALA Secretariat is requested to investigate the possibilities of publishing the History of Floating Aids to Navigation, with budget costs for layout and printing and to consider producing a proposal for having it available at the 2014 Conference.

### Re-Issue Questionnaire on Complementary Uses of Historic Lighthouses (Activity 9.6.1)

It had been agreed at the end of the previous work period that although the results of the questionnaire on Complementary 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.

Some discussion took place on the content of the questionnaire and it was suggested that the questionnaire should be initially re-issued with a smaller number of questions which might encourage an increased response rate. It is hoped that this can be issued very early in the next work period. Once the responses have been analysed it may then be possible to target the respondents for more detailed responses in relation to Alternative Use and Maintenance problems.

It is also suggested that a request is included in the liaison note to ANM Committee concerning amendments to the IALA Questionnaire to include some questions on Historic Lighthouses which might allow a wider coverage for gaining information. Proposed questions:

* How many of your manned or previously manned lighthouses have a legal protection as historical monuments?
* How many of your lighthouses are open to the public, and approximately how many visitors do they have in a year?

### Promote an international network for historic lighthouses (Activity 9.6.2)

This continues to be 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. This is especially illustrated by the hosting of the International IALA Seminars 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 IALA events in Kristiansand in 2000, Gothenburg in 2005, Santander in 2009 and Piraeus in 2013.

The Heritage page of the IALA Website has now been installed and the content was discussed during the meeting. It is intended that this will allow improved member and public access to the manual and other selected material. It was also recommended that presentations or notes of presentations from the Heritage Seminars should be included on the web page. It will be necessary in the future for the Working Group to provide support for the updating and maintenance of the Heritage page once it has become fully operational. Other links to external sites such as Lighthouse museums, Lighthouse Tourism sites and other sites which may be of interest were provided and will be passed to website administrator. Bob McIntosh is requested to continue monitoring and submitting information for inclusion on the Heritage page of the IALA Website until EEP22.

The editor of the IALA Bulletin requested that the WG2 Chairman produce an article for the Bulletin on a regular basis which will be called ‘The Lighthouse Preservation Corner’. Committee Members are encouraged to continue the successful contributions and that they continue to offer articles to allow ‘The Lighthouse Preservation Corner’ to be published on a regular basis. As these are considered to be a valuable resource it is hoped that these can be made available through the website sometime after the bulletin is published.

Paul Ridgway has volunteered 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 such information may be developed in a similar way to Adrian Wilkin’s booklet on the History of Floating Aids to Navigation, for future inclusion on the IALA website page. Bob McIntosh has confirmed to Paul Ridgway that his proposal is supported by the heritage working group. This matter is on-going to the next session.

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.

A presentation was made by Jo van der Eynden and Jan-Robert Jore from the Norwegian Lighthouse Museum using the internet services kystreise.no and coastlight.net.

The cooperating partners behind the Norwegian kystreise.no service have been Lindesnes Lighthouse Museum which is the lead partner of the museums of the Norwegian Coastal Administration, The Norwegian Coastal Administration, The County of Vest-Agder and The Vest-Agder museum. Norgesfilm AS has developed the technological platform.

The development of kystreise.no and coastlight.net has been financed by Lindesnes Lighthouse Museum, The Norwegian Coastal Administration, Arts Council Norway, the Norwegian Directorate for Cultural Heritage, The Norwegian Directorate of Fisheries, The Norwegian Ministry of Fisheries and Coastal Affairs, The County of Vest-Agder and Sørlandets kompetansefond.

The pilot project kystreise.no, with the English language version coastlight.net, is a project based on a digital map, where information consisting of texts, photos and short films which are geo-tagged to geographical positions. A technological platform has been developed to reach tourists, students, museums and the general public through smart phones, tablets and PC/Mac.

The pilot project is focusing on Lindesnes Lighthouse, and the local environment, presenting the lighthouse history, and the lighthouse as part of a wider cultural landscape with other AtoNs, historical harbours, fishing communities, pilots and so on. The project has been developed in close co-operation with the Norwegian Coastal Authorities.

The project is to be geographically extended to cover the Norwegian coast through the four cooperating museums which are the museums of the Norwegian Coastal Authorities. 25 other maritime museums will co-operate and contribute with content from their regions.

The platform has also been used in a Scandinavian pre-project, with the support from the Nordic Council of Ministers.

The final aim is to use this project to build an international maritime heritage network that can be formally recognised at the IALA Conference in Spain in 2014.

The goals of the project are:

1. To reach people with maritime history through smart phones, tablets and PC/Mac.
2. By utilising web based, mobile technology museums can reach new groups of interested people with the maritime history of their region. Tourists and students are obvious targets for the new service together with everybody else interested in maritime history.

Content: Developing a technological platform has been one goal for the project, but the development of content for the service has been even more important. Five thematic documentary films have been made, covering topics from AtoNs, lighthouse history to weather and food from the sea. Short documentary films have been made covering specific geographical places and its maritime history. By using the digital map and assigning icons to geographical positions, the user of the service can get access to documentary films, photos and text telling the story of that specific geographical location.

The key points of the presentation were:

1. The technical platform of the pilot-project.
2. Examples of the content and the presentations.
3. The plans and potential for extending the project on an international level.

Licensing and re-use of the coastlight.net content: All content produced for the coastlight.net/kystreise.no services are licensed for use under Creative Commons v. 3.0 (BY-ND) and can be re-used by others under the licensing rules CC (BY-ND). Creative Commons licensing does not include the digital maps and technological platform for the digital maps which is owned by Google.

Response after the presentation:

The representative from Ireland said the project fitted in nicely with their on-going plans for developing a tourist oriented trail around the Irish coast. He would examine the coastlight.net service in order to evaluate possible cooperation. The French representatives also expressed interest in cooperation. The Chinese representative would also look into the possibilities of having some of the Chinese historical lighthouses included in the coastlight.net service.

The Norwegian Lighthouse Museum will in due course get in touch with these representatives to prepare for their possible cooperation.

The final conclusion of the discussion was formulated as one of the objectives of the IALA Heritage Working Group for the coming IALA 2014-2018 work period.

To inform and, hopefully inspire people in the IALA membership to contribute with information from their respective countries, Jo van der Eynden and Jan Robert Jore were invited to write an article for the IALA bulletin.

Action Items

Bob McIntosh is requested to continue monitoring and submitting information for inclusion on the Heritage page of the IALA Website until EEP22.

Committee 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 is requested to meet editorial deadlines to ensure that articles are available for each edition of the IALA Bulletin wherever possible by passing suitable articles to the editor for inclusion in ‘The Lighthouse Preservation Corner’.

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 (Activity 16.2.1)

A seminar on the subject of the Preservation of Lighthouse Heritage was held in Piraeus, Greece between 3 and 7 June 2013. The seminar was kindly supported by the Hellenic Navy Lighthouse Service and the Aikaterini Laskaridis Foundation.

The seminar was attended by 50 delegates representing 14 countries.

A series of 36 presentations were given under the following headings:

* + Case Studies;
  + Building restoration;
  + Traditional lenses;
  + Traditional lenses and historic lighthouses;
  + Selection criteria for preservation / conservation;
  + Harmonisation with modern society;
  + Case studies in Greece.

A presentation was made by students from the national technical University of Athens (NTUA).

There was a technical visit to the Dana Lighthouse, on Poros Island.

An evening programme of lighthouse associated presentations and performances were hosted by the Aikaterini Laskaridis Foundation on Tuesday 4 and Wednesday 5 June 2013.

The social programme consisted of Welcome reception and a seminar dinner at the Hotel Grande Bretagne, both events were hosted by the Aikaterini Laskaridis Foundation.

The seminar produced 15 conclusions.

The seminar was considered a great success by all those that attended and thanks are due in particular to Panos Chiotis and the staff of the Hellenic Navy Lighthouse Service and Mike Hadley of the IALA Secretariat whose efforts before and during the event ensured this success.

A final review of the report took place during this meeting and the final report is now available for sending to the attendees. The IALA Secretariat is requested to forward a copy of the report to all seminar attendees as per the list included in the report. The IALA Secretariat is also requested to forward the report to IALA Council to note. The IALA Secretariat is requested to post a copy of the report on the IALA website.

It is intended that the presentations from the seminar will be available through the IALA website and proposals are currently under discussion.

Action Items

The Secretariat is requested to forward a copy of the report on the Seminar on Maintaining Historic Lighthouses to all seminar attendees as per the list included in the report (EEP21-14.2.2.2).

The IALA Secretariat is requested to forward the report on the Seminar on Maintaining Historic Lighthouses to IALA Council to note.

The IALA Secretariat is requested to post a copy of the report on the Seminar on Maintaining Historic Lighthouses on the IALA Website.

### Review and update NAVGUIDE Section 8.11 (Activity 12.4.1)

This item was completed at EEP 18.

### Future Work Programme 2014 – 2018

A significant discussion took place on possible future work items for this working group within the next work programme, beyond the conference in May 2014. It was stated that 12 year goals are not yet clear and Members were invited to submit proposals for short and long term goals to the Chairman / Vice Chairman by 19 October 2013. These discussions are summarised in EEP21-14.2.2.1 Working Group 2 Future Work Programme. It is anticipated that this document should inform the future work programme discussions during the next PAP meeting.

Action Item

Committee Members are requested to submit proposals to the Vice Chairman on future work programme for EEP21-14.2.2.1 by 19 October 2013.

The EEP Chairman is requested to incorporate the WG2 Future Work Programme proposal EEP21-14.2.2.1 Working Group 2 Future Work Programme into the future work programme of the EEP Committee.

### Heritage and WWA

During PAP25 and the discussions concerning the future of Heritage in IALA the WWA have been put forward as a possible vehicle for the output of the Heritage working group. A discussion was held between Stephen Bennett WWA and the working group Chairman to discuss co-operation beyond this EEP session. Stephen Bennett advised that he is preparing a Level 1 Model Course on Decommissioning of Major Lighthouses which will be submitted to EEP22. An additional proposed work item has been added to the future work proposals of the working group for Working Group 2 to co-operate with the IALA WWA on education and training on Heritage matters.

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

### Produce guideline on anti-fouling techniques (marine growth) for floating aids, boat landings, etc. (Activity 10.1.1)

Information on anti-fouling of buoys has been passed to Working Group 1 for further development. The remainder of the information, EEP18/WG2/WP8 on Anti-fouling in relation to slipways, jetties etc., has been retained and the information is now available on IALA Wiki site under “anti-fouling on walkways and jetties”. This item is now considered to be complete.

### Expand Guideline No. 1076 on Building maintenance and conditioning in low energy environments and guidance on low power ventilation systems and avoiding condensation (Activity 10.2.1)

Nicolas Fady of CETMEF made a presentation on Humidity in Lighthouses during plenary at EEP19 and further discussion took place during EEP21. He has agreed to keep the WG up to date on any developments in the monitoring of the French Lighthouses. He indicated that there has been no progress to date.

He also advised that CETMEF have contributed to a Guideline on the Methodology of Repair to Lanterns, which is due to be finalised and published by the end of 2013.

In order to expand Guideline No. 1076 on Building Maintenance and Conditioning in Low Energy Environments it will be necessary for EEP Committee members to provide information on this type of problem in their authorities or to provide the Committee with a contact within their organisation who may be able to provide this type of information. This item is considered important by the group and it has therefore been put forward for inclusion in the Future Work programme.

Action Items

EEP 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 (Activity 10.3.1)

Bob McIntosh previously updated the paper on the effect of Natural Disasters on AtoN Structures (EEP18/9/6) with information received from New Zealand and some additional documentation from Japan.

No time was available to discuss this matter but it will be considered under the on-going work on the preparation of the Heritage and Civil Engineering page of the new IALA Website.

Action items

Bob McIntosh is requested to continue to monitor the impact of Natural Disasters on Historic Lighthouses in particular and how authorities have reacted to the problems.

### Revise Lighthouse Maintenance Guidance (Activity 10.2.2)

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. A link to this document is provided on the Heritage (and Civil Engineering) page of the new IALA Website.

It was suggested at EEP18 that what could be useful to members would be to access specifications used by authorities for various aspects of lighthouse building maintenance, which could then be collated in a location where they could be accessed by the members. This would allow them to compare their existing specifications with those in use by other authorities, which may provide options for improvement.

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

See section 9.1.8.

# Working Group 3 – Environment, Quality Assurance, TRAINiNG & Publications

Working Group 3 was asked to respond to input papers EEP21-10.2, EEP21-10.3.1, EEP21-10.3.2 EEP21-10.3.3, EEP21-10.3.4, EEP21-10.3.5, EEP21-10.3.6, EEP21-10.3.7, EEP21-10.3.8, EEP21-10.3.9, EEP21-10.3.10, EEP21-10.3.11, EEP21-10.4, EEP21-10.5, EEP21-10.5.1, EEP21-10.5.2, EEP21-10.5.3, EEP21-10.5.4, EEP21-10.5.5, EEP21-10.5.6, EEP21-10.5.7, EEP21-11 and EEP21-12.

The detailed work programme for Working Group 3 was reviewed and the specific tasks progressed and completed.

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

Develop procedures for informal sharing of information between members (Activity 1.1.1)

The objective of this work item is to develop procedures for informal sharing of information between members.

A draft policy was developed outlining the use of the IALA Wiki for the sharing and storage of information related to the work of IALA Committees. The draft policy will be accessible on the IALA Wiki and available for comment.

The IALA Wiki maintenance page contains information on adding content to the Wiki including sharing video content. Further detailed procedures will be developed describing the process for adding and updating content.

David Jeffkins will continue to develop further procedures for adding content to the IALA Wiki in consultation with Omar Frits Eriksson.

*Action Items*

David Jeffkins is requested to develop further procedures in consultation with Omar Frits Eriksson for updating and adding new content to the IALA Wiki.

### Develop and populate the IALA Wiki with information on Aids to Navigation (AtoN) not included in official IALA documents (Activity 1.2.1)

The objective of this work item is to populate the IALA Wiki with information on AtoN that is not included in official IALA documents. Information will be added as it becomes available.

Committee members are requested to continue to use the IALA Wiki for sharing information used in the development of IALA guidance documentation and posting relevant AtoN engineering documentation and information.

*Action Item*

EEP Committee members are requested to continue to use the IALA wiki (<http://www.iala-aism.org/wiki/ialawiki/index.php/Main_Page>) for sharing information used in the development of IALA guidance documentation and posting relevant AtoN engineering documentation and information.

## Environment and Safety (Task 6\*)

### Revise NAVGUIDE content for guidance on safe handling and management of mercury (Activity 6.1.2)

The objective of this work item is to review the existing guidance in the NAVGUIDE for the safe handling and management of mercury.

This work item was completed at EEP18.

### Develop new Guideline on methods for determining and reducing carbon footprint of AtoN services (Activity 6.1.1)

### Revise Guideline 1036 IALA Green Guide (Activity 6.3.1)

### Incorporate consideration of the implications of global warming on AtoN provision in the ‘Green Guide (Activity 6.2.1)

The objective of these work items is to provide guidance to members on environmental issues in the provision of AtoN, including the introduction of methods of determining and reducing the carbon footprint of AtoN services and exploring the importance of the implications of global warning on AtoN management.

The intercessional work completed by Adam Hay and Greg Hansen on input paper EEP21-10.2 Guideline 1036 on Environmental Management was noted. The revised guideline has been further updated to incorporate technical considerations addressing specific areas of concern and potential solutions to minimize the environmental impact of AtoN equipment and activities.

The updated Guideline EEP21-14.1.3.8 (revised Guideline 1036 on Environmental Management in Aids to Navigation) is now complete.

*Action Items*

The Secretariat is requested to forward EEP21-14.1.3.8 (revised Guideline 1036 on Environmental Management in Aids to Navigation) to Council for approval.

### Develop new Guideline on treating legionella and coli bacteria in water supplies of de-staffed stations (Activity 6.1.3)

The objective of this work item is to provide advice to members on treating legionella and coli bacteria in water supplies of de-staffed lighthouse stations.

This work item was discussed and it was agreed that there may not be a wide need for IALA guidance on this specific topic. There is also likely to be sufficient guidance on dealing with this issue from national health and safety authorities.

Information on treating legionella and coli bacteria in water supplies of de-staffed stations provided by Simon Millyard has been loaded on the IALA Wiki.

In addition to this it was agreed that some information on this topic should be added to chapter 11.4 Utilities Supply of Guideline 1007 Lighthouse Maintenance. Review of this document has been included in the planned review of documents in the next work program.

*Action Item*

David Jeffkins is requested to update chapter 11.4 Utilities Supply of Guideline 1007 Lighthouse Maintenance with information on treating legionella and coli bacteria in water supplies of de-staffed stations and submit as input to EEP22.

### Develop new Guideline on safety management for AtoN activities (Activity 6.1.4)

The objective of this work item is to provide advice to members on safety management for AtoN repair and maintenance activities.

This work item was completed at EEP19.

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

The objective of this task is to assist in the development of IALA guidance documents and training material for the IALA World Wide Academy (The Academy).

### Develop Model Course for level 2 technician training (Activity 7.1.2)

Input paper EEP21-10.3.1 WWA Model Course Overview on Level 2 Technician Training was updated following the development of eight additional model courses. The updated document was endorsed by the Committee and will be sent to the Academy for Approval

### Input papers related to Level 2 Technician Model Courses

The Working Group reviewed eight input papers related to Level 2 technician training model courses. The course covered topics such as buoy handling, wind generators, mains AC utility power systems, remote monitoring of AtoN, maintenance planning and records, AtoN structures, materials, corrosion protection and preservation of structures.

A total of eight new model courses were endorsed by the Committee and will be sent to the Academy for approval.

### Review new IALA Guideline on VTS Train the Trainer (input paper EEP21-10.3.9)

The draft Guideline forwarded by the VTS Committee was reviewed and supported as providing very helpful generic guidance on procedures to Train the Trainer. It was considered that although it addressed VTS training, its content was equally relevant to Aids to Navigation Level 1 and 2 training. The Academy should be encouraged to consider adding a reference to the new Guideline in the next edition of Recommendation E-141 on Aids to Navigation Training.

### Review new model course WWA.L1.4 on an introduction to e-Navigation (input paper EEP21-10.3.11)

The new draft model course forwarded by the e-Nav Committee was reviewed and endorsed in its entirety.

*Action Items*

The Secretariat is requested to forward EEP21-14.1.3.10 (WWA model course overview on Level 2 technician training) to the Academy for approval.

The Secretariat is requested to forward EEP21-14.1.3.1 (WWA model course L2.10.1-2 – remote monitoring of AtoN) to the Academy for approval.

The Secretariat is requested to forward EEP21-14.1.3.2 (WWA model course L2.2.4 – wind generators) to the Academy for approval.

The Secretariat is requested to forward EEP21-14.1.3.3 (WWA model course L2.2.5-6 – mains AC power systems petrol and diesel generators) to the Academy for approval.

The Secretariat is requested to forward EEP21-14.1.3.4 (WWA model course L2.11.1-5 – AtoN structures, materials, corrosion and protection) to the Academy for approval.

The Secretariat is requested to forward EEP21-14.1.3.5 (WWA model course L2.11.6 – preservation of structures) to the Academy for approval.

The Secretariat is requested to forward EEP21-14.1.3.6 (WWA model course L2.11.7 – maintenance and planning records) to the Academy for approval.

The Secretariat is requested to forward EEP21-14.1.3.7 (WWA model course L2.2.7 – lightning protection) to the Academy for approval.

The Secretariat is requested to forward EEP21-14.1.3.9 (WWA model course L2.1.5-6 – buoy handling and safe working practices) to the Academy for approval.

The Secretariat is requested to forward a liaison note EEP21-14.1.3.11 to the Academy inviting it to consider inserting a reference to the new Guideline on VTS Train the Trainer in the next Edition of Recommendation E-141.

The Secretariat is requested to forward EEP21-14.1.3.12 (WWA model course L1.4 – an introduction to e-Navigation) to the Academy for approval.

## Product Procurement (Task 8\*)

### Maintain and develop product templates (Activity 8.2.1)

The objective of this work item is to maintain and develop the existing product templates for use by members for the procurement of AtoN equipment and systems.

Input paper EEP21-10.4 was reviewed and it was agreed that it was not practical to develop a guideline on the procurement of AtoN equipment and systems as countries and organisations have their own procurement processes and procedures and an IALA guideline would in most cases not be usable.

It was also noted that there are some parameters in the product templates that could be included in IALA Guideline 1085 on Standard Format for Electronic Exchange of AtoN Product Information. Review of this document and the product templates has been included in the planned review of documents in the next work program.

*Action Item*

The Secretariat is requested to make the product templates available on the IALA website.

### Develop IALA product guide database schema (Activity 8.3.1)

This work item was completed at EEP16.

### Develop new Guideline and XML schema for AtoN product data exchange (Activity 8.3.2)

This work item was moved to WG1 at EEP18 and was completed.

## Quality Management (Task 12\*)

### Contribute to the review of Recommendation O-132 on quality management for aids to navigation authorities (Activity 12.1.1)

This work item was completed at EEP18.

### Review Guideline 1052 on quality management in aids to navigation service delivery (Activity 12.1.2)

This work item was completed at EEP18.

### Review NAVGUIDE (Activity 12.1.3)

The objective of this work item is to assist the ANM Committee in updating the IALA NAVGUIDE. The IALA Council have agreed to only a limited review of the NAVGUIDE being required during this work period as a substantial review was completed during the last work period.

The various recommended revisions were discussed and suggested amendments were prepared for ANM as Liaison Note (EEP21-14.1.3.13).

A Summary of the changes made include:

1. Correcting a minor text error on mooring design swing radius;
2. Reference to correct range table for sound signals;
3. Updated LED light efficacy figures;
4. Response on request for additional photos, tables and figures.

This NAVGUIDE review task is now complete.

The ANM Committee also sought advice from the EEP Committee on any recommended changes to the IALA Annual Questionnaire. Liaison Note (EEP21-14-1-3-14) was drafted detailing a number of recommended changes.

*Action Items*

The Secretariat is requested to forward the Liaison note on NAVGUIDE general updates (EEP21-14.1.3.13) to the ANM Committee.

The Secretariat is requested to forward the Liaison note on recommended changes to the IALA Questionnaire (EEP21-14.1.3.14) to the ANM Committee.

### Develop Guideline on Key Performance Indicators (Activity 12.2.1)

The objective of this work item is to develop a draft Guideline on key performance indicators to assist members with measuring the performance of their AtoN activities.

The working group reviewed input document (EEP21-14-10.5) and concluded that the input received has not allowed a detailed guidance document to be produced, however the information developed to date was valuable and should be made available to members. The information has been posted on the IALA Wiki.

This work item is now complete.

## Workshops and Seminars (Task 16\*)

This work item is completed for the work period.

# ****Working Group 4 – Light and Vision**** (WG4)

WG4 was asked to respond to input papers EEP21-10.5.7, EEP21-11.1.1, EEP21-11.1.2, EEP21-11.2.1, EEP21-11.2.2, EEP21-11.2.3, EEP21-11.2.4, EEP21-13.1.

## Engineering – Visual Aids **(Task 2\*)**

This task is complete.

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

Gather conspicuity documents in a suite of documents (3.2)

The input paper (EEP21-13.1) was reviewed. The EEP Committee have broadened the scope to cover all IALA EEP documentation from the point of view of both external and internal users, with the goal of simplifying searching for information as well as unifying the document structure. A working paper spread sheet has been produced and the Committee have reviewed the documentation and updated the spread sheet with the documents that need to be reviewed and what updates are required with a view to inform the next work programme.

Action Items

Adrian Wilkins, Bob McIntosh, Malcolm Nicholson are requested to review the IALA documentation that they are responsible for and update the work plan summary spread sheet (EEP21-14.2.13) with the documents that need to be reviewed and forward to the David Jeffkins by 19 October 2013.

Omar Frits Eriksson is requested to use the EEP document ownership master record spread sheet (EEP21-14.2.13) to inform the 2014-18 EEP Work Programme

### Provide guidance on vertical divergence of lights, focal plane height, sector lights, daymark design, surface colours (3.4)

* Consider providing guidance on focal plane height of AtoN (3.4.1)

A discussion was held on how best to provide IALA members with information on vertical divergence and it was decided that the present Guideline could be supplemented with further information. Input paper EEP21-11.2.4 Vertical Divergence of fixed light sources was reviewed and the various relevant sections were added into the present guideline. The Committee reviewed the revised Guideline and recommend that revised Guideline be forwarded to Council for approval.

Action Item

The secretariat is requested to forward EEP21-14.1.4.1 to Council for approval.

* Revise Guideline 1041 on Sector Lights to include new work on this subject (3.4.2)

The Committee considered the input papers from EEP21 on sector light measurement and installation procedures, as well as input on alternative methods to provide sector lights. There was a great deal of discussion on how best to proceed with the structure and information in the Guideline to present a clear and useable document. A working paper has been produced combining these inputs to update the guideline.

Action Items

The Secretariat is requested to forward working paper EEP21-14.2.4.1 Guideline 1041 on sector lights to EEP22.

Frank Hermann, Malcolm Nicholson, Aivar Usk, Fernando Romero are requested to review and update the draft Guideline on Sector Lights EEP21-14.2.4.1 intersessionally and submit to EEP22.

* Illumination of Structures 1061 (3.6)

Following the input paper (EEP21-11.2.1) from Korea a discussion took place on how best to proceed with updating IALA Guideline 1061 on Light Applications – Illumination of Structures. A previous input paper from Malcolm Nicholson was reviewed and the group started a working paper on updating the guideline. A working paper was produced referencing all the various inputs to update this Guideline with a view to completion during the 2014-18 work period.

Action Item

The Secretariat is requested to forward working paper EEP21-14.2.4.2 on Illumination of Structures 1061 to EEP22.

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

This task is complete.

## Workshops and Seminars (Task 16\*)

EEP Planned workshops and seminars for the 2010 – 2014 work term are complete.

# Review of Current Work Programme

The work programme (input document EEP21-12) was reviewed and updated (output document EEP21-14.1.12).

Action Item

The Secretariat is requested to forward the EEP work programme EEP21-14.1.12 to Council to note.

# Future Work Programme

The draft Work Programme 2014-2018 (EEP21-13) was discussed and updated to Working Paper EEP21-14.2.13.

Action item

The Secretariat is requested to forward Working Paper EEP21-14.2.13 to EEP22.

# Review of output and working papers

During the reports by the Working Group Chairmen, the output papers were reviewed and their disposition agreed and the working papers noted.

# Any Other Business

## IALA Wiki Policy

David Jeffkins drafted a policy document for the IALA Wiki, which has been posted to the IALA Wiki for information.

Action items

Committee Members are requested to upload useful documents directly to the IALA Wiki.

## Cape Schanck, Australia, video

Malcolm Nicholson introduced a video of the first order rotating optic in Cape Schanck, SE of Melbourne, highlighting the cam-operated shutter blanking system used to create a sharp cut off between red and white sectors.

## Senegal buoy tender video

Amadou Ndiaye introduced a YouTube video showing the Senegal buoy tender Samba Laobe Fall. The vessel has 210m2 work deck and is used for maintenance of 200 buoys and 16 lighthouses, Hydrographic surveys, salvage and rescue, antipollution with 250m oil scraper and general supply operations.

## IALA Expert Panel

Omar Frits Eriksson and Christian Lagerwall were approved as IALA endorsed Experts.

# Review of session report

The report of the meeting (EEP21-14-16) was reviewed and approved by the Committee.

Action item

The Secretariat is requested to forward the EEP21 Committee report (EEP21-14.1.16) to Council to note.

# Date and venue of next meeting

It is intended that EEP22 will meet in October 2014 at IALA, at dates to be advised.

# Closing of the Meeting

The Deputy-Secretary General informed the Committee of the addition of Christine Philips to the IALA team, noting that she had previously worked with IHO in Monaco. He thanked Seamus Doyle for his work as Committee Secretary. He noted that arrangements were well in hand for the IALA conference in Spain in May 2014 and that approximately twice as many proposals for presentations had been received as available speaker slots. IALA technical secretary services will be provided by Seamus Doyle, Wim van der Heijden, Stuart Ruttle and Mike Hadley. Mentioning to the PAP he referred to the continuing work on the IALA strategy, noting the importance of the EEP work to IALA.

The Deputy-Secretary General acknowledged the imminent retirement of Christian Lagerwall and thanked him for his many years of valuable service. Christian noted that his father and grandfather had worked in the lighthouse service, totalling 140 years of combined service. He had joined the EEP Committee following the IALA Conference in Velthoven. The Deputy-Secretary General made a presentation to Christian on behalf of IALA and the Committee to mark his great contribution.

The Deputy-Secretary General ended by thanking everyone for their hard work during the week.

The Chairman acknowledged the enthusiastic way in which a heavy workload had been tackled and he also thanked the Committee for its efforts during the meeting. He added his appreciation to Christian Lagerwall for his years with the EEP Committee. He then thanked the Vice Chair and Secretary and asked that the Committee’s gratitude be passed to the Secretariat for their cheerful and courteous support.

He concluded by saying that all were invited to EEP22, wished everyone a safe journey home and hoped to see everyone at the next meeting.

# List of Annexes

1. Agenda

A copy of the agenda is at ANNEX A.

1. Participants

A list of 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. Developments in lighthouse conservation

Reports from members on the status of lighthouse conservation are at ANNEX F.

1. Action Items

A list of action items is at ANNEX G.

1. Agenda

**21st Meeting of the Engineering, Environmental & Preservation of Historic Lighthouses Committee**

The 21st meeting of the EEP Committee will be held from 7 – 11 October, 2013 at IALA, St Germain en Laye, France.

The opening plenary will commence at 1300 on Monday 7 October and the closing plenary will end at approximately 1300 on Friday, 11 October.

Committee Chair, Vice-Chair and Working Group Chairpersons are requested to meet at 0900 on Monday, 7 October.

**AGENDA**

1. Introduction
   1. Administration and safety brief
   2. Approval of the agenda
   3. Apologies and introductions
   4. Programme for the week
2. Review of action items from last meeting
3. Review of input papers
4. Reports from other bodies:
   1. Report from IALA Council – 55th Session, May 2013
   2. Report from PAP25, May 2013
   3. Report from MSC92, June 2013
   4. Report from NAV59, September 2013
5. Reports from Rapporteurs:
   1. Developments in Aids to Navigation (M1\*) Adrian Wilkins
   2. Developments in Renewable Energy Sources (M2\*) Moray Waddel
   3. Developments in Battery Technology (M3\*) Jonas Lindberg
   4. Developments in New Light Sources (M4\*) Malcolm Nicholson
   5. IALA Certification Process (M5\*) (Task removed at C52)
   6. CIE-IALA Liaison (M6\*) Malcolm Nicholson
   7. IALA Dictionary (M7\*) Ómar Frits Eriksson
6. Presentations (15 minutes duration)
   1. Brief on WWA Stephen Bennett
   2. Introduction to Development of AtoN Simulator in KOREA Dr. FANG, Tae Hyun
   3. Aid to Navigation on Demand Fog Lights Aivar Usk
   4. Nakkehoved Optic mercury removal Jorgen Royal Petersen
   5. Acrylic glazing for Lighthouses Simon Millyard
   6. Antifouling video Mariano Marpegen
7. Establish Working Groups
8. Working Group 1 – AtoN infrastructure 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. **Risk Assessment Techniques in AtoN Design and maintenance** (Task 11\*)
   5. **e-Navigation across Committees** (Task 13\*)
   6. **Polar Engineering** (Task 14\*)
   7. The use of Audible Signals as aids to navigation (*in conjunction with ANM*) (Task 15\*)
   8. **Workshops and Seminars** (Task 16\*)
9. **Working Group 2 –** Heritage, Conservation and Civil Engineering (WG2)
   1. **Heritage and Conservation** (Task 9\*)
   2. **Civil Engineering and Structures** (Task 10\*)
   3. **Workshops and Seminars** (Task 16\*)
10. **Working Group 3 -** Environment, quality assurance, training and publications (WG3)
    1. Knowledge Sharing / Knowledge Management, taking into account open source software (Task 1\*)
    2. **Environment and safety** (Task 6\*)
    3. **Aids to Navigation Training, IALA WWA** (Task 7\*)
    4. **Product Certification** (Task 8\*) (Task removed at C52)
    5. **Quality Management** (Task 12\*)
    6. **Workshops and Seminars** (Task 16\*)
11. **Working Group 4 – Light and Vision (WG4)**
    1. **Engineering – Visual Aids (Task 2\*)**
    2. **Visual perception of lights and daymarks** (Task 3\*)
    3. **Workshops and Seminars** (Task 16\*)
12. Review of Current Work Programme
13. Future Work Programme (2014 – 2018)
14. Review of output and working papers
    1. Output Papers
    2. Working Papers
15. Any other business
16. Review of session report
17. Date and venue of next meeting
18. Close of meeting
19. List of Participants

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**Apologies**

Apologies were received from the following.

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| Moray Waddell | NLB | Scotland |
| Adam Hay | Nawae | Papua New Guinea |
| Mahdi Al Mosawi | MENAS | Kingdom of Bahrain |

1. Working Group Participants
2. AtoN infrastructure design and maintenance

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|  | Name | Organisation / Country |
|  | Adrian Wilkins (Chairman) | Pharos Marine / England |
|  | Peter Dobson | Trinity House/ UK |
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|  | Mohammed Sultan Al Said | AMNAS/ Oman |
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|  | Leig Arne Larnen | Norwegian Coastal Administration/ Norway |
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1. Heritage, conservation and civil engineering

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|  | Eoghan Lehane | Commissioners of Irish Lights/Ireland |
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|  | Hilde Audresen | Norwegian Coastal Administration/Norway |
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1. Light and Vision

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|  | Y-M Blanchard | CETMEF France |
|  | Shaheen H Mirza | MENAS |

1. List of Input Papers

**All papers were posted to the Committee website**

| Number | Meeting | Agenda Item | Title / Author (if required) | Presented by / WG |
| --- | --- | --- | --- | --- |
| 1 | EEP20 |  | Report of EEP20 (EEP20/output/1) | All |
| 2 | EEP21- | 1.2 Rev3 | Agenda | OFE / CS |
| 3 | EEP21- | 1.4 | Programme for the week (Finalised at pre-meeting) | OFE / CS |
| 4 | EEP21- | 2 | Action Items from EEP20 | OFE / CS |
| 5 | EEP21- | 3 Rev11 | Papers’ List (Finalised at pre-meeting) | OFE / CS |
| 6 | EEP21- | 3.1 | EEP21 input paper template | All |
| 7 | EEP21- | 4.1 | Report of C55 | OFE / CS |
| 8 | EEP21- | 4.2 | Report of PAP25 May 2013 | OFE / CS |
| 9 | EEP21- | 4.3.1 | MSC 92 - Draft Report Of The Maritime Safety Committee On Its 92nd session | OFE / CS |
| 10 | EEP21- | 4.3.2 | MSC 92-WP.1 Report -Add.1 - [For items 1, 2, 3 (part), 5 (part), 6 (part), 7, 8, 10, 11, 14 and 16] | OFE / CS |
| 11 | EEP21- | 4.3.3 | MSC 92-WP.1 Report -Add.2 - [For items 1, 2, 3 (part), 5 (part), 6 (part), 7, 8, 10, 11, 14 and 16] | OFE / CS |
| 12 | EEP21- | 4.3.4 | Report on imo msc92 | OFE / CS |
| 13 | EEP21- | 4.4 | NAV 59 - Draft Report To The Maritime Safety Committee. | OFE |
| 14 | EEP21- | 5.1 | Developments in Commercial Fuel Cell Power supplies & Antifouling - Rapporteur Report | Adrian Wilkins |
| 15 | EEP21- | 5.3.1 | Comparison Document TAG VRLA-LC-LiFePO4 - Rapporteur item | S Hoekstra |
| 16 | EEP21- | 5.3.2 | Lead Crystal Battery 6-CNFJ-100 - Rapporteur item | S Hoekstra |
| 17 | EEP21- | 5.3.3 | Lead Crystal Battery Presentation - rapporteur item | S Hoekstra |
| 18 | EEP21- | 5.3.4 | Material Safety Data Sheet - Spark Batteries - rapporteur item | S Hoekstra |
| 19 | EEP21- | 5.4 | Developments in New Light Sources - Rapporteur Report | Malcolm Nicholson |
| 20 | EEP21- | 8.1.1 | Antifouling section update for guideline 1015 | 1 |
| 21 | EEP21- | 8.1.2 | Draft Guideline on Theft and Vandalism Deterrents | 1 |
| 22 | EEP21- | 8.1.3 | Liaison Note from ANM on Disaster Recovery | 1 |
| 23 | EEP21- | 8.1.4 | Antifouling paint on marine structures | 1 |
| 24 | EEP21- | 8.1.5 | Liaison note e-NAV to ANM, EEP & VTS Committees on Disaster Recovery | 1 |
| 25 | EEP21- | 8.1.6 | Buoy inclining test demonstration video | 1 |
| 26 | EEP21- | 8.5 | S101 Data Classification and Encoding Guide | 1 |
| 27 | EEP21- | 8.5.1 | IALA Recommendation on the IALA Common Shore-based System Architecture (CSSA) 20130925b | 1 |
| 28 | EEP21- | 8.5.2 | Draft Revision Of Rec e-NAV-140 on e-Navigation Architecture-Shore Perspective(Ed2) | 1 |
| 29 | EEP21- | 8.5.3 | Liaison note from eNAV to committees and PAP re S100 PS | 1 |
| 30 | EEP21- | 8.5.4 | Information Paper on Technical Guidelines for implementation of VDES | 1 |
| 31 | EEP21- | 8.6 | Proposed Topics for inclusion in a Guideline on Design and Construction of AtoN in Cold Regions | 1 |
| 32 | EEP21- | 8.6.1 | Draft Guideline on the Challenges of Providing AtoN Services in Polar regions draft v10 post plenary | 1 |
| 33 | EEP21- | 8.6.2 | IALA Workshop on Challenges of Providing AtoN Services in Polar Regions - draft report Post Plenary | 1 |
| 34 | EEP21- | 8.7 | Draft Liaison note to the e-NAV Committee on e-Navigation and the IHO Registry | 1 |
| 35 | EEP21- | 9.1.1 | A History of Floating Aids to Navigation | 2 |
| 36 | EEP21- | 9.1.2 | IALA Bulletin Articles related to Heritage and Civil Engineering matters | 2 |
| 37 | EEP21- | 9.1.3 | Heritage and Conservation in IALA - C55 discussion | 2 |
| 38 | EEP21- | 9.1.4 | National Lighthouse Museum in Korea | 2 |
| 39 | EEP21- | 9.3.1 | Report of the Seminar on Preservation of Lighthouse Heritage - Piraeus June 2013.docx | 2 |
| 40 | EEP21- | 10.2 | Guideline 1036 on Environmental Management | 3 |
| 41 | EEP21- | 10.3.1 | WWA Model Course Overview on Level 2 Technician Training | 3 |
| 42 | EEP21- | 10.3.2 | WWA Model Course L2.2.4 Tech - Wind Gens Module 2 Element 2.4 | 3 |
| 43 | EEP21- | 10.3.3 | WWA Model Course Level 2 Tech - Mains AC Utility Power Systems; Diesel and Petrol Generators | 3 |
| 44 | EEP21- | 10.3.4 | WWA Model Course L2.10.1-2 Remote monitoring of AtoN Rev 0 August 2013 | 3 |
| 45 | EEP21- | 10.3.5 | ~~WWA Level 2 Model Course - Maintenance Planning & Records 11.7- Technicians Level 2~~ | 3 |
| 46 | EEP21- | 10.3.5 rev1 | WWA Level 2 Model Course - Maintenance Planning & Records 11.7- Technicians Level 2 Rev 1 (Supersedes EEP21-10.3.5) | 3 |
| 47 | EEP21- | 10.3.6 | WWA Model Course L2.11.1-5 AtoN structures, materials, corrosion and protection Rev 0 July 2013 | 3 |
| 48 | EEP21- | 10.3.7 | WWA Model Course L2.11.6 Preservation of structures Rev 0 July 2013 | 3 |
| 49 | EEP21- | 10.3.8 | WWA Model Course L2.2.4 Rev1 Wind generators 2 August 2013 - Michel Cousquer comments | 3 |
| 50 | EEP21- | 10.3.9 | IALA Model Course v-103 on Train the Trainer, Edition 1, v10 | 3 |
| 51 | EEP21- | 10.3.10 | WWA Model Course L2.2.7 Lightning Protection Rev 1 September 2013 | 3 |
| 52 | EEP21- | 10.3.11 | WWA L1 Model Course 1.4 on an introduction to e-Navigation 2013 (Rev 1) | 3 |
| 53 | EEP21- | 10.4 | Updating IALA Guideline 1085 from Certification Templates - Work item 8.1.1 rev 1 | 3 |
| 54 | EEP21- | 10.5 | Draft Guideline on KPI | 3 |
| 55 | EEP21- | 10.5.1 | Liaison note from ANM to e-NAV & EEP on the Annual Questionnaire | 3 |
| 56 | EEP21- | 10.5.2 | Liaison Note from ANM about the NAVGUIDE-1 | 3 |
| 57 | EEP21- | 10.5.3 | Liaison Note from ANM about NAVGUIDE-2 | 3 |
| 58 | EEP21- | 10.5.4 | NAVGUIDE Timetable | 3 |
| 59 | EEP21- | 10.5.5 | NAVGUIDE Work Plan | 3 |
| 60 | EEP21- | 10.5.6 | Draft NAVGUIDE | 3 |
| 61 | EEP21- | 10.5.7 | Introduction of Inspection and Test System for AtoN Equipment in Korea | 3, 4 |
| 62 | ~~EEP21-~~ | ~~11~~ | ~~EEP Document Ownership Master Record Moved to EEP21-13.1~~ | All |
| 63 | EEP21- | 11.1.1 | Guideline 1041 amendment AA86 Input Paper on Sector Lights with multi source | 4 |
| 64 | EEP21- | 11.1.2 | Rotating Colour Switching Sector Light | 4 |
| 65 | EEP21- | 11.2.1 | Draft Guideline on the Illumination of Structures | 4 |
| 66 | EEP21- | 11.2.2 | Draft revised Guideline 1041 on Sector Lights | 4 |
| 67 | EEP21- | 11.2.3 | Examples of design Illumination of Structures in Korea | 4 |
| 68 | EEP21- | 11.2.4 | Vertical Divergence of fixed light sources | 4 |
| 69 | EEP21- | 12 | EEP Work Programme, as approved by C55 (EEP20/output/2) | All |
| 70 | EEP21- | 13 | Future Work Programme | C & VC |
| 71 | EEP21- | 13.1 | EEP Document Ownership Master Record | All |

1. 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 |
| --- | --- | --- | --- | --- |
| 1 | EEP21- | 14.1.1.1 | draft Guideline on Providing AtoN services in Polar Regions | Council for approval |
| 2 | EEP21- | 14.1.1.2 | Information document on Calmar Software on Mooring Calculation Software | Wiki |
| 3 | EEP21- | 14.1.1.3 | draft Guideline 1006 Ed3 Plastic Buoys Update Oct2013 | Council for approval |
| 4 | EEP21- | 14.1.1.4 | draft Guideline 1015 Ed2 1 Painting Aids to Navigation Buoys 08-10-13 | Council for approval |
| 5 | EEP21- | 14.1.1.5 | draft Guideline on Theft and Vandalism Detterents v5 | Council for approval |
| 6 | EEP21- | 14.1.3.1 | WWA Model Course L2.10.1-2 Remote monitoring of AtoN Rev 0 August 2013 | WWA for approval  Council for endorsing |
| 7 | EEP21- | 14.1.3.2 | WWA Model Course L2.2.4 Wind generators Rev 2 August 2013 | WWA for approval  Council for endorsing |
| 8 | EEP21- | 14.1.3.3 | WWA Model Course L2.2.5-6 Mains AC power systems petrol and diesel generators Rev 2 September 2013 | WWA for approval  Council for endorsing |
| 9 | EEP21- | 14.1.3.4. | WWA Model Course L2.11.1-5 AtoN structures, materials, corrosion and protection Rev 0 July 2013 | WWA for approval  Council for endorsing |
| 10 | EEP21- | 14.1.3.5 | WWA Model Course L2.11.6 Preservation of structures Rev 0 July 2013 | WWA for approval  Council for endorsing |
| 11 | EEP21- | 14.1.3.6 | WWA Model Course L2.11.7 Maintenance Planning and Records Rev 1 August 2013 | WWA for approval  Council for endorsing |
| 12 | EEP21- | 14.1.3.7 | WWA Model Course L2.2.7 Lightning Protection Rev 1 September 2013 | WWA for approval  Council for endorsing |
| 13 | EEP21- | 14.1.3.8 | draft IALA Guideline 1036 on Environmental Management V3 | Council for approval |
| 14 | EEP21- | 14.1.3.9 | WWA Model Course L2.1.5 buoy handling Rev 0 September 2013 | WWA for approval  Council for endorsing |
| 15 | EEP21- | 14.1.3.10 | WWA L2 Overview IALA WWA.L2.0 Ed 2 Dec 13 | WWA for approval  Council for endorsing |
| 16 | EEP21- | 14.1.3.11 | Liaison note to the World Wide Academy | WWA |
| 17 | EEP21- | 14.1.3.12 | WWA Model Course L1 Model Course 1.4 on an introduction to e-Navigation 2013 (Rev 1) | WWA for approval  Council for endorsing |
| 18 | EEP21- | 14.1.3.13 | Liaison note to ANM about the Navguide | ANM |
| 19 | EEP21- | 14.1.3.14 | Liaison note to ANM about IALA questionnaire | ANM |
| 20 | EEP21 | 14.1.4.1 | Draft Guideline 1065 on Vertical Divergence Ed2 | Council for approval |
| 21 | EEP21- | 14.1.12 | EEP Current work programme updated at EEP21 | Council for noting |
| 22 | EEP21- | 16 | Draft Report EEP21 | Council for noting |

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

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| --- | --- | --- | --- |
| Number | | Title | Status |
| EEP21- | 14.2.2.1 | Working Group 2 Future Work Programme proposal | Vice Chair |
| EEP21- | 14.2.2.2 | Report on Preservation of Lighthouse Heritage seminar in Piraeus, Greece | To Council |
| EEP21- | 14.2.4.1 | Draft revised Guideline 1041 on Sector Lights | To EEP22 |
| EEP21- | 14.2.4.2 | Draft Guideline on the Illumination of Structures | To EEP22 |
| EEP21- | 14.2.13 | EEP Document Ownership Master Record - Updated 19102013 | To EEP22 |
| EEP21- | 14.2.14 | EEP21 Work Program Ideas for 2014-2018 20131011 | To EEP22 |

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 EEP 21.

**Australia**

Major maintenance projects were recently completed at the three oldest Northern Territory AtoNs. These included concrete repairs at Cape Don (1917) and repainting at Charles Point (1892) & Cape Hotham (1928). These projects created a logistics challenge due to their remoteness and the requirement to protect the environment at all times.

Conservation management plans have been completed for the listed AtoNs on Dent Island (1879) and Low Isles (1877). Both of these AtoNs lie within the Great Barrier Reef World Heritage Area. These plans were completed in collaboration with the Great Barrier Reef Marine Park Authority.

AMSA plan to complete management plans for a number of AtoNs each year in compliance with various government acts and regulations.

Opening of the Sugarloaf Point lighthouse (1875) to public access for ILLW in August was well received with close to 1000 visitors over the three days. Day 1 was set aside solely for local school children to visit this usually closed site.

AMSA has sponsored a new book titled ‘First Order- Australia’s Highway of Lighthouses’. This 420 page publication outlines the history of the first order lights in Australian waters. VIP copies of this publication will be forwarded to IALA in due course.

Planning has begun for the 100th anniversary of Commonwealth Government management of AtoNs in Australia to be celebrated in 2015. Among the highlights it is hoped a philatelic stamp issue depicting a number of AMSA lighthouses will be approved by Australia Post. We also plan to open a number of usually closed AtoNs for public access.

A new position has been created at AMSA for a Heritage Officer to primarily assist in the development of conservation management plans, compliance and regulatory approvals.

**Ireland – All Island Lighthouse Trail Project**

Technological progress enables the Commissioners of Irish Lights (CIL) to continue to deliver a critical maritime safety service more effectively with a reduced operational infrastructure at each lighthouse. This means that at lighthouses there is, or soon will be, surplus property and buildings available for alternative use. The properties are of important heritage value and are central in chronicling the maritime history of the island of Ireland. Also significantly, lighthouses are located in some of the most scenic coastal locations on the island and lend themselves very well to tourism.

CIL has been working closely with state tourism agencies on the concept of developing a flagship tourism product of an “All Island Lighthouse Trail” around the coast of Ireland, which is instantly recognisable and marketed both nationally and internationally. The concept presents an opportunity to secure the future of these historic maritime properties by developing alternative uses that will benefit local communities, visitors, tourism and national identity. The primary objective is to develop a high-quality cultural tourism product using CIL’s surplus properties together with on-site interpretation that will be designed to inform and engage the visitor and present the unique stories and history of each location. The concept is strongly supported by state tourism agencies in Ireland and Northern Ireland.

CIL has recently secured €2.5 million funding under the EU INTERREG IVA programme towards the development of the first phase of this project. This phase will see the redevelopment of 5 lighthouses and the former Lightkeepers’ dwellings at three sites in Northern Ireland and at two sites in County Donegal in the Republic of Ireland, providing a mix of visitor facilities comprising accommodation, visitor centres/facilities and interpretation. The project was officially announced jointly by the Irish Minister for Transport, Tourism & Sport, Mr Leo Varadkar, and the Northern Ireland Assembly Minister for Enterprise, Trade & Investment, Ms Arlene Foster, on 4th September 2013.

This EU funded project has significant potential because, in addition to maritime safety services, it allows CIL to capitalise on the spectacular locations of its lighthouses, harness their heritage value and work with local communities in an exciting and innovative way to deliver economic and tourism benefits.

The lighthouse sites being developed under the EU funded project will be added to the seven sites already operating in the Republic of Ireland and Northern Ireland with the eventual plan being to have between 15 to 20 lighthouses operating as part of a tourist trail all around the coast of Ireland.

**Norway**

The lighthouse authorities and the lighthouse museum are cooperating in producing information signs for all of the 63 listed lighthouses in governmental ownership. It is a rather ambitious project that will take several years to complete.

The digital project Kystreise.no/Coastlight.net was formally launched in May, and presented at the IALA conference in Athens in June. It was also presented at a Scandinavian-Baltic conference on maritime heritage in Thallin, Estonia. The project presents a technological platform for the documentation and presentation of the maritime cultural landscape, and as developed by the Norwegian Lighthouse Museum in close cooperation with the Lighthouse authorities. Hopefully it can be used by IALA members to document and present our global lighthouse- and ATON heritage.

In August the lighthouse administration invited all the lighthouse-tenants in the southern region for a two days seminar, where matters like safety legislation and questions concerning maintenance and conservation was discussed.

The lighthouse museum at Lindesnes, has done a survey of historical documents and artefacts from the national centre for the prevention of maritime environmental hazards, which is a part of the coastal administration. The material will be digitalized and made accessible for scientific studies.

**Scotland**

The Northern Lighthouse Board made the decision three years ago as a result of increased pressures on costs to prepare a plan for disposal of all non-operational property. This plan is now in its second year with the sale of Strathy Point Lighthouse and Covesea Lighthouse both of which became redundant after the 2010 UK wide Aid to Navigation Review. In addition the remaining sites which included holiday homes at Mull of Galloway Lighthouse, Stoer Head Lighthouse and Mull of Kintyre Lighthouse are now sold or in the process of preparation for sale. A small number of smaller buildings at other sites have also been included in the sale as modernisation projects release additional properties.

Two of these properties at Covesea and Mull of Galloway have been the subject of Community Right to Buy process which allows a local group to submit a bid for the property. They are required to obtain funding but are then given “the right to buy” the property at market value with a suitable business plan but they also require to show that they have local public support for their proposals by, for example, a local referendum.

The NLB continue to support the aims of IALA on Lighthouse Heritage with Bob McIntosh encouraged to attend EEP, IALA Heritage Seminars and the IALA Conference as well as making presentations at other Lighthouse Heritage events.

**Sweden**

As described before, the historical lighthouses in Sweden have been the subject of several investigations. A still on-going investigation is the so-called Cultural Property investigation, which suggested that a large number of lighthouses would be maintained by the state in the long term.

The assignment also includes an inventory of the historically valuable properties that the state no longer needs. The point is that the State shall continue to own real estate that is of particular historical importance, has a particularly important symbolic value or is vital to national security.

Last month the government's investigators were presented with a proposal for which of the historic buildings should be retained in long term by the state of cultural reasons and which should be sold when it is no longer needed. Since the investigation is only about existing national historical buildings, not all lighthouses were assessed.

Of the 40 lighthouses and beacons that were considered, it was proposed that 13 should be sold. The rest goes to the National Property Board.

1. Action Items

Action Items for the IALA Secretariat

1. [The Secretariat is requested to add an agenda item to the agenda for EEP22 for a Rapporteur report from Dr Fang on monitoring developments of simulation techniques. 9](#_Toc370719828)
2. [The Secretariat is requested to upload the video provided by Sipke Hoekstra and the statistical information regarding plastic buoys provided by Jorg Unterderweide to the IALA Wiki web site. 12](#_Toc370719829)
3. [The Secretariat is requested to forward EEP21-14.1.1.3 to Council for approval. 12](#_Toc370719830)
4. [The Secretariat is requested to upload the CETMEF video on testing the stability of buoys from the Brest workshop to the IALA Wiki web site. 12](#_Toc370719831)
5. [The Secretariat is requested to forward the Amended Guideline on Painting Aid to Navigation Buoys (EEP21-14.1.1.4) for Council approval. 12](#_Toc370719832)
6. [The Secretariat is requested to forward the draft Guideline on Theft and Vandalism Deterrents (EEP21-14.1.1.5) to the IALA Council for approval. 12](#_Toc370719833)
7. [Following updating by Mobilis, the Secretariat is requested to arrange to make the buoy mooring design software available to IALA members. 13](#_Toc370719834)
8. [The Secretariat is requested to make document EEP21-14.1.1.2 on the use of Mobilis buoy mooring design software available on the Wiki. 13](#_Toc370719835)
9. [The Secretariat is requested to forward the draft Guideline on AtoN Services in Polar regions (EEP21-14.1.1.1) to the IALA Council for approval. 14](#_Toc370719836)
10. [The IALA Secretariat is requested to investigate the possibilities of publishing the History of Floating Aids to Navigation, with budget costs for layout and printing and to consider producing a proposal for having it available at the 2014 Conference. 15](#_Toc370719837)
11. [The Secretariat is requested to forward a copy of the report on the Seminar on Maintaining Historic Lighthouses to all seminar attendees as per the list included in the report (EEP21-14.2.2.2). 19](#_Toc370719838)
12. [The IALA Secretariat is requested to forward the report on the Seminar on Maintaining Historic Lighthouses to IALA Council to note. 19](#_Toc370719839)
13. [The IALA Secretariat is requested to post a copy of the report on the Seminar on Maintaining Historic Lighthouses on the IALA Website. 19](#_Toc370719840)
14. [The Secretariat is requested to forward EEP21-14.1.3.8 (revised Guideline 1036 on Environmental Management in Aids to Navigation) to Council for approval. 22](#_Toc370719841)
15. [The Secretariat is requested to forward EEP21-14.1.3.10 (WWA model course overview on Level 2 technician training) to the Academy for approval. 23](#_Toc370719842)
16. [The Secretariat is requested to forward EEP21-14.1.3.1 (WWA model course L2.10.1-2 – remote monitoring of AtoN) to the Academy for approval. 23](#_Toc370719843)
17. [The Secretariat is requested to forward EEP21-14.1.3.2 (WWA model course L2.2.4 – wind generators) to the Academy for approval. 23](#_Toc370719844)
18. [The Secretariat is requested to forward EEP21-14.1.3.3 (WWA model course L2.2.5-6 – mains AC power systems petrol and diesel generators) to the Academy for approval. 23](#_Toc370719845)
19. [The Secretariat is requested to forward EEP21-14.1.3.4 (WWA model course L2.11.1-5 – AtoN structures, materials, corrosion and protection) to the Academy for approval. 23](#_Toc370719846)
20. [The Secretariat is requested to forward EEP21-14.1.3.5 (WWA model course L2.11.6 – preservation of structures) to the Academy for approval. 23](#_Toc370719847)
21. [The Secretariat is requested to forward EEP21-14.1.3.6 (WWA model course L2.11.7 – maintenance and planning records) to the Academy for approval. 24](#_Toc370719848)
22. [The Secretariat is requested to forward EEP21-14.1.3.7 (WWA model course L2.2.7 – lightning protection) to the Academy for approval. 24](#_Toc370719849)
23. [The Secretariat is requested to forward EEP21-14.1.3.9 (WWA model course L2.1.5-6 – buoy handling and safe working practices) to the Academy for approval. 24](#_Toc370719850)
24. [The Secretariat is requested to forward a liaison note EEP21-14.1.3.11 to the Academy inviting it to consider inserting a reference to the new Guideline on VTS Train the Trainer in the next Edition of Recommendation E-141. 24](#_Toc370719851)
25. [The Secretariat is requested to forward EEP21-14.1.3.12 (WWA model course L1.4 – an introduction to e-Navigation) to the Academy for approval. 24](#_Toc370719852)
26. [The Secretariat is requested to make the product templates available on the IALA website. 24](#_Toc370719853)
27. [The Secretariat is requested to forward the Liaison note on NAVGUIDE general updates (EEP21-14.1.3.13) to the ANM Committee. 25](#_Toc370719854)
28. [The Secretariat is requested to forward the Liaison note on recommended changes to the IALA Questionnaire (EEP21-14.1.3.14) to the ANM Committee. 25](#_Toc370719855)
29. [The secretariat is requested to forward EEP21-14.1.4.1 to Council for approval. 26](#_Toc370719856)
30. [The Secretariat is requested to forward working paper EEP21-14.2.4.1 Guideline 1041 on sector lights to EEP22. 26](#_Toc370719857)
31. [The Secretariat is requested to forward working paper EEP21-14.2.4.2 on Illumination of Structures 1061 to EEP22. 26](#_Toc370719858)
32. [The Secretariat is requested to forward the EEP work programme EEP21-14.1.12 to Council to note. 27](#_Toc370719859)
33. [The Secretariat is requested to forward Working Paper EEP21-14.2.13 to EEP22. 27](#_Toc370719860)
34. [The Secretariat is requested to forward the EEP21 Committee report (EEP21-14.1.16) to Council to note. 27](#_Toc370719861)

Action Items for Members

1. [The Chair/ Vice Chair are requested to review the action to finalise the historic lighthouse template and its application to commence populating an historic lighthouse database and add to the 2014-2018 Work Programme if required. 7](#_Toc370503547)
2. [Jong Uk Kim is requested to keep the Committee informed of progress with the AtoN simulator and act as Rapporteur on simulation techniques. 9](#_Toc370503548)
3. [Jong Uk Kim is requested to make enquiries re the possible availability of the simulator to the IALA WWA. 9](#_Toc370503549)
4. [Adrian Wilkins is requested to liaise with Mobilis to finalise the updating of the Mobilis buoy mooring design software to v1.0 by Christmas 2013. 13](#_Toc370503550)
5. [Peter Dobson is requested to provide a real-life step-by-step example of generating a Calmar model from an existing design using the Mobilis buoy mooring design software to Adrian Wilkins for inclusion in the buoy mooring design software manual (EEP21-14.1.1.2) by Christmas 2013. 13](#_Toc370503551)
6. [Jorg Unterderweide is requested to translate the menu and user manual for the Mobilis buoy mooring design software into German and forward to Adrian Wilkins for inclusion in the buoy mooring design software manual (EEP21-14.1.1.2) by Christmas 2013. 13](#_Toc370503552)
7. [Shaheen Mirza is requested to translate the menu and user manual for the Mobilis buoy mooring design software into Arabic and forward to Adrian Wilkins for inclusion in the buoy mooring design software manual (EEP21-14.1.1.2) by Christmas 2013 . 13](#_Toc370503553)
8. [Committee Members are requested to review the e-Navigation information on S100 Data Classification and Encoding Guide which will be important for future electronic data transfer regarding all Aids to Navigation and submit comments to EEP22. 14](#_Toc370503554)
9. [Jorgen Royal Petersen is requested to convert the spreadsheet for solar sizing in Polar regions to English and provide to the IALA Secretariat for the use ofIALA Members. 14](#_Toc370503555)
10. [Bob McIntosh is requested to continue monitoring and submitting information for inclusion on the Heritage page of the IALA Website until EEP22. 18](#_Toc370503556)
11. [Committee 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. 18](#_Toc370503557)
12. [Bob McIntosh is requested to meet editorial deadlines to ensure that articles are available for each edition of the IALA Bulletin wherever possible by passing suitable articles to the editor for inclusion in ‘The Lighthouse Preservation Corner’. 18](#_Toc370503558)
13. [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. 18](#_Toc370503559)
14. [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](#_Toc370503560)
15. [Committee Members are requested to submit proposals to the Vice Chairman on future work programme for EEP21-14.2.2.1 by 19 October 2013. 19](#_Toc370503561)
16. [The EEP Chairman is requested to incorporate the WG2 Future Work Programme proposal EEP21-14.2.2.1 Working Group 2 Future Work Programme into the future work programme of the EEP Committee. 19](#_Toc370503562)
17. [EEP 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. 20](#_Toc370503563)
18. [Bob McIntosh is requested to continue to monitor the impact of Natural Disasters on Historic Lighthouses in particular and how authorities have reacted to the problems. 20](#_Toc370503564)
19. [David Jeffkins is requested to develop further procedures in consultation with Omar Frits Eriksson for updating and adding new content to the IALA Wiki. 21](#_Toc370503565)
20. [EEP Committee members are requested to continue to use the IALA wiki (http://www.iala-aism.org/wiki/ialawiki/index.php/Main\_Page) for sharing information used in the development of IALA guidance documentation and posting relevant AtoN engineering documentation and information. 21](#_Toc370503566)
21. [David Jeffkins is requested to update chapter 11.4 Utilities Supply of Guideline 1007 Lighthouse Maintenance with information on treating legionella and coli bacteria in water supplies of de-staffed stations and submit as input to EEP22. 22](#_Toc370503567)
22. [Adrian Wilkins, Bob McIntosh, Malcolm Nicholson are requested to review the IALA documentation that they are responsible for and update the work plan summary spread sheet (EEP21-14.2.13) with the documents that need to be reviewed and forward to the David Jeffkins by 19 October 2013. 26](#_Toc370503568)
23. [Omar Frits Eriksson is requested to use the EEP document ownership master record spread sheet (EEP21-14.2.13) to inform the 2014-18 EEP Work Programme 26](#_Toc370503569)
24. [Frank Hermann, Malcolm Nicholson, Aivar Usk, Fernando Romero are requested to review and update the draft Guideline on Sector Lights EEP21-14.2.4.1 intersessionally and submit to EEP22. 26](#_Toc370503570)
25. [Committee Members are requested to upload useful documents directly to the IALA Wiki. 27](#_Toc370503571)