Report of the IALA Workshop
on the
Application of Aids to Navigation within Marine Spatial Planning

Executive Summary

A workshop on the subject of the Application of Aids to Navigation within Marine Spatial Planning was held at IALA between 21 and 24 May 2013.

The workshop was attended by 35 delegates representing 14 countries (see ANNEX A).

A series of presentations were given under four broad headings:

- Setting the Scene;
- The Planning process;
- Marking;
- Revision of IALA Recommendation O-139 on the Marking of Man-Made Offshore Structures.

The preparation for the work of the Working Groups also included three case studies from Australia, The Netherlands and The USA.

The workshop then broke into 3 Working Groups to discuss and then produce points for a future IALA Guideline under the headings of:

1 Planning process / legislation.

2 Use of GIS in the planning process.

3 Risk control / Risk acceptance.

There was a focussed and constructive review of the draft revised IALA Recommendation O-139 in preparation for its completion at ANM21.

Three Working Groups considered issues around Marine Spatial Planning and provided suggested input for a future IALA Guideline on Marine Spatial Planning.

The social programme consisted of a welcome reception and a workshop dinner.

The workshop produced:

1 One output paper (see ANNEX D).

2 The conclusions drawn from the workshop are at ANNEX E.

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The Application of Aids to Navigation (AtoN) within Marine Spatial Planning

1 INTRODUCTION

A workshop on the subject of the Application of Aids to Navigation (AtoN) within Marine Spatial Planning was held at IALA, between 21 and 24 May 2013. The workshop was attended by 35 delegates representing 14 countries.

A list of participants is at ANNEX A.

All presentations form part of the output of the workshop, posted to the FTP server.

2 SESSION 1 - OPENING

This session was chaired by Phil Day, Northern Lighthouse Board, Chairman of the IALA ANM Committee and Workshop Chairman.

2.1 Welcome from Gary Prosser, Secretary-General of IALA

Gary Prosser welcomed all delegates, remarking that he recognised a number of faces but that it was good to see some newcomers too. Having said that all IALA's facilities were at the delegates' disposal he anticipated a professionally rewarding few days, with considerable scope for networking. He remarked that due to the expertise that it manages to gather to its meetings and workshops / seminars it is well paced to take on tasks that other bodies may not yet be prepared to undertake.

Turning to Marine Spatial Planning (MSP), he noted that it is a 'hot' topic that needs solutions. He observed that waterways are no longer just the domain of the mariner and that Aids to Navigation (AtoN) need to embrace the requirements of many new and emerging stakeholders. However, despite the growing number of stakeholders there is also substantial growth in shipping and this brings with it further challenges due to the constraints being placed on some waterways.

Gary Prosser ended by remarking that 2013, as the last year before the 2014 IALA Conference and the end of the current 4-year Work Programme, continues to be busy and he hoped that many present might be able to attend the Conference, in which he felt that MARITIME SPATIAL PLANNING would play a significant role.

2.2 Administrative and health and safety information

This was provided by Mike Hadley, IALA Technical Co-ordination Manager, by means of a presentation.

2.3 Purpose of the workshop

The Chairman then asked everyone to introduce themselves and indicate what interest they had in MARITIME SPATIAL PLANNING. He then outlined the function of IALA, the aim & objectives of the workshop and ran briefly through the programme.

In his remarks he indicated that the workshop had emerged from work within the Ads to Navigation Management (ANM) Committee and, in particular, that this had been stimulated by the growth in Offshore renewable Energy Infrastructure (OREI). He said that it was his experience that within some countries a number of bodies now work together and it was hoped that information emerging from the workshop would help those countries about to embark or just embarking on MARITIME SPATIAL PLANNING. It was also hoped that the workshop's results would complement the work of the Nautical Institute and the work on the draft EU Directive on MARITIME SPATIAL PLANNING. He noted, with pleasure, that the delegates were from diverse range of backgrounds and hoped that this would help the workshop's review of the IALA recommendation O-139 on the marking of offshore structures and pave the way for a future IALA Guideline on MARITIME SPATIAL PLANNING.

2.4 Overview of Offshore Renewable Energy Infrastructure (OREI) development in North America, Europe and globally

The presentation was made by Peter Douglas, Northern Lighthouse Board, Scotland

The presentation had three main sections: An overview of the international development of OREI, Raising questions in marking OREI and Spatial Planning in connection with OREI.

The overview of international developments was followed by a slide showing the 'Positives & Negatives'. This led to the presentation of control measures, each of which was then discussed.

Peter Douglas then turned to developments in the less mature wave and tidal energy fields, giving examples of the different approaches being used. There were two slides on marking and lighting, followed by discussion of the MARITIME SPATIAL PLANNING from the mariner's perspective. The presentation ended with a list of questions regarding the marking of OREI, giving food for thought for the workshop.

2.5 OREI Technology (Renewable Energies and Offshore Windfarms)

The presentation was made by Richard Britton, Renewables UK.

After a brief introduction to Scottish Power, Richard Britton reviewed some current offshore projects and the government targets that they were aimed at helping to achieve. The presentation then focussed on Offshore Wind, Illustrating its national diversity and the potential impact on shipping routes. Wind turbine dimensions and capacities were discussed, as well as the growing weight of components and the impact that this is having on the foundations required. The necessarily accompanying substation and cables were also covered. The presentation then turned to wave and tidal energy, with a slide showing activity local to Scotland before turning to worldwide projects.

2.6 Overview of session and Questions & Answers

In this session there were questions on the ability to meet current targets, to which it was replied that the current economic climate is reducing the ability to meet targets. The costs involved are so large that this inevitably means multiple parties being involved and that some companies are restricted by their national legislation, both of which slow down negotiations. This prompted the comment that although renewable projects are often subsidised there is no implicit connection between gaining a permit and funding. It was then remarked that in the UK a permit needs to be exploited within 5 years.

In response to a query about how manufacturers cope variations in national legislation, it was said that the use of the existing IALA Recommendation O-139 is widespread and it is generally easy to embrace national requirements, although an exception was quoted with regulations from the International Civil Aviation Organisation (ICAO).

When asked about the added risk perceived during the construction phase of offshore structures, this was acknowledged but it was said that the construction methodology was the key factor, although the chartering of appropriate shipping is also a factor.

The ideal MARITIME SPATIAL PLANNING process, for both Oil and Gas installations and for OREI, was felt to consist of a strategic environmental assessment, followed by establishing appropriate boundaries, taking all stakeholders and shipping routes into account.

It was noted that OREI are currently being established in depths up to 40 metres.

When queries about the effect of Windfarms on both radar and radio transmissions, it was said that they had little or no effect on radio transmissions, including AIS. Radar is known to suffer from side echoes and for this reason the standard advice is to locate shipping routes at least 1.5 nm away from Windfarms. It was also suggested that side echoes could be detected in the open sea by their correlation with AIS tracks. This sparked a vigorous discussion that had to be continued during the following coffee break.

The hazard of anchoring amongst the electrical cables associated with OREI was discussed and it was said that it provided no additional problem than other underwater cabling and certainly posed no threat to the anchoring vessel. It was also said that anchors rarely penetrate the seabed to the depth at which OREI cable are buried, which can be between 0.5 to 3 metres. The greatest threat to OREI cables was reckoned to be fishing.

3 SESSION 2 – CASE STUDIES

This session was chaired by Phil Day, NLB, Scotland.

3.1 Case study – The Netherlands

The presentation, which included GIS in Project ACCSEAS, was made by Tatia Kalker, Ernst Bolt & Pieter Paap, Rijkswtwerstaat (RWS) the, The Netherlands. The presentation was split into three parts:

3.1.1 Marine Spatial Planning and Navigation. How do they meet in the (Dutch) North Sea?

This presentation was made by Tatia Kalker, RWS.

The presentation looked at how the Netherlands considers Maritime Spatial Planning, the need for and aims of Maritime Spatial Planning, shipping and other issues, dealing with spatial tensions and cross-border co-operation.

It was indicated that Maritime Spatial Planning is a process that needs to be tailored to the particular requirements of a specific region. The conditions in the North Sea favour the establishing of OREI and the carrying out of many other sea based exploitation activities, which were itemised. This increases the urgency and all countries bordering the North Sea are co-operating in developing it, bearing in mind that the EU is also working towards a Maritime Spatial Planning Directive.

The Netherlands experience has been ‘learning by doing’ and this was described in some detail. The presentation concluded with two slides that discussed dealing with spatial tension and cross-border co-operation. In summary, it was stated that:

- Maritime Spatial Planning is a neutral way of working to facilitate all users of the sea.
- Maritime Spatial Planning is a pioneering in an international context, learning by doing.
- In the North Sea preventing conflicts between wind energy and shipping is a major issue.

- Great importance of connecting shipping knowledge with MSP process.

It ended with the question 'How navigation measures can create solutions for increasing spatial pressures?'.

3.1.2 Safety of shipping: Basis for the 1st and 2nd round: Clearways

This presentation was made by Ernst Bolt, RWS and followed on from the previous one. It charted the progress of the Maritime Spatial Planning process in the Netherlands, covering restrictions imposed and financial aspects, the results obtained and the valuable lessons learned. Emphasis was placed on analysis and modelling but the inevitable political and legal issues were also discussed. It was clear that AIS data played a key role in the gathering of traffic data and the establishing of a voyage database. The impact on evolving shipping routes was demonstrated, leading to the current situation, which has been approved by IMO. However, it was made clear that matters are not static and that there will be further developments to come.

3.1.3 ACCSEAS: e-Navigation testbed in the North Sea region

This presentation was made by Pieter Paap, RWS, who in this instance was speaking as a member of the ACCSEAS project and not on behalf of RWS

Having briefly introduced the project a short video, dealing with the Geographical Information System (GIS) and Maritime Spatial Planning aspects of ACCSEAS was shown, from which the conclusion drawn was that the North Sea is an example of a decrease of manoeuvrable space, due to:

- increasing density of shipping;
- increasing diversity of shipping;
- scale enlargement of ships;
- increasing demand for alternative utilization of marine space, e.g. wind farms, fish farms, other offshore activities.

The presentation then ran through a series of nine indicators that have been identified that need to be considered in Maritime Spatial Planning, each of which was dealt with in some detail.

The essential sources for dealing with Maritime Spatial Planning issues were identified as:

- frequent network evaluations;
- frequent incidents / accidents reports;
- general operational reports;
- asset management reports;
- frequent safety and risk analysis.

This led to the conclusion that an essential tool for Maritime Spatial Planning is a Geographical Information System (GIS), which in turn led to a presentation of the GIS used by the ACCSEAS project.

The project ended with the project's provisional conclusions and with the question is it Marine Spatial Planning or Maritime Spatial Planning?

3.2 Case study – Australia

The presentation was made by Nick Lemon, AMSA, Australia.

Nick Lemon began by asking 'What is Maritime Spatial Planning' and showing different definitions, drawn from the EC and UNESCO. This led to consideration of management, specifically water space management. He then turned to the particular circumstances in Australia, showing how a regional approach has been taken but stating that the eventual goal is a national coastal shipping management plan. Instances were given about how water space management had affected local /

regional traffic and showing that given the spread of government departments involved that Australia suffers from the same conflicts of interest that are experienced in the North Sea.

Nick Lemon then introduced the Australian Maritime Spatial Information System (AMSIS) and how it can be used to build up maps / charts of specific areas and, intriguingly how it can be used by a tablet. There was support for an S-100 boundary product specification before the following conclusions were stated:

- Maritime Spatial Planning – relatively advanced where ecological or the environment is the objective – not so much for shipping or maritime safety;
- AMSA is increasingly adopting Maritime Spatial Planning principles – a national coastal shipping management plan;
- Water Space Management - consultative planning and problem solving;
- MSP & WSM tools - consultation, consultation, engagement, persistence, patience, web-enabled geospatialness & S-10X.

3.3 Overview of session and Questions & Answers

The statement was made that Maritime Spatial Planning is a young discipline and it was suggested that a domain be taken within the IHO S-100 GI registry for Maritime Spatial Planning. This was later clarified to mean, initially, the taking a domain for boundaries. It was recognised that confining shipping to narrow lanes does increase the risk of overtaking and nearly head on collisions and there was discussion of the need to harmonise the current state of national approaches to Maritime Spatial Planning.

It was stated that Australia is moving towards a national shipping management plan, based on the work already undertaken in its North West and North East regions.

In discussion of the proposed EU directive, it was stated that a somewhat prescriptive draft exists and its future is subject to negotiation, over which some member states have reservations. Further information can be obtained via the URL: http://ec.europa.eu/maritimeaffairs/policy/maritime_spatial_planning/index_en.htm.

End of Day 1

4 SESSION 3 – THE PLANNING PROCESS

This session was chaired by Michael Skov, DMA, Denmark.

4.1 Marine Planning – England Overview

The presentation was made by Tom Woolley, Marine Management Organisation, UK.

The presentation began by pondering ‘Why do we need marine planning?’, to which the response was that the overarching driver is increasing use of marine space and resources, impacting on the sustainability of the marine environment. This was followed by an introduction to the UK’s legislative process and its key marine planning documents and the marine planning system in UK. It was said that Maritime Spatial Planning in the UK has a 20-year time horizon. Attention then turned to the marine planning system in England and the role played by the Marine Management Organisation. The planning cycle was explained and the accompanying different forms of assessment and the marine planning components. As an example the East Marine Plan was quoted before the offshore wind farm licensing process was explained. Examples for shipping and ports were then taken from the East marine plan before Tom Woolley passed on his reflections of his ‘learning by doing’ to date. During the presentation he said that other stakeholders are being encouraged to take shipping into account.

4.2 Marine Planning and Licensing Policy - Scotland

The presentation was made by Phil Gilmour, Marine Scotland.

With experience of MSP before general guidance was available, Phil Gilmour had concluded that there are four key issues: spatial planning, efficient licensing, research gaps and regional initiatives. It was explained that in Scotland spatial planning is Directive led and that its main outputs are the Sectoral Marine Plan and Regional Locational Guidance, each of which were explained in some detail. Phil Gilmour then turned to the licensing policy and explained that early experience had led to the establishing of a single point of contact / one stop shop for licensing matters. He then spoke about the socio-economic impact, citing some specific examples before ending with comments about socio-economic mitigation.

4.3 Risk control & mitigation

The presentation was made by Roger Barker, Trinity House, England & Wales.

The presentation drew heavily on available AIS information and the uses to which it can be put, including short and long time span of recordings. Specific instances where traffic analysis was used to indicate where MSP proposals needed to be reconsidered were shown, on both the UK's East and South coasts. The need to use careful analysis was covered, together with the limitations of AIS information. Specific attention was paid to the challenges posed by both leisure and fishing activities. The presentation then turned to the growing need for vessel traffic corridors, the factors that need to be considered: the location, vessel manoeuvring characteristics, mechanical breakdown, environmental conditions, other marine users, submarine cables and radar interference. It was concluded that there is no fixed answer to the corridor width question. It must be based on case-by-case assessment.

Roger Barker then discussed IWRAP Mk2 and how it can be used in risk assessment before moving on to turbine layout and the marking and other issues involved.

Due to the nature of the Memorandum of Understanding between Trinity House and the UK's Maritime and Coastguard Agency governing the release of AIS information, the presentation used cannot be made generally available.

4.4 Stakeholder Involvement

The presentation was made by Titia Kalker, RWS, The Netherlands.

Based on experience gained in the development of MSP in The Netherlands, it was suggested that the approach should be one of common interests instead of fixed positions. The initial taking of fixed positions by all stakeholders had not been conducive to reaching agreement. A four step approach had been taken:

- defining political ambitions (e.g. 6000 MW);
- defining starting points and working methods (e.g. 2 NM as starting point, formal safety assessment);
- defining stakeholder interests;
- mapping spatial claims.

Combining the derived maps had shown that there was about 80% general agreement, allowing the focus to be turned on to the remaining areas of disagreement. It emerged that stakeholders need to be encouraged to be specific in their statements about they are seeking to achieve and there is also a need to work on stakeholder confidence in the process.

It was found that the best results were achieved when the stakeholders developed the options, the government facilitated the process, cost, safety, environmental effects were compared and the politicians decided on the best option. An option agreed by all the stakeholders is likely to be the best option. An example off the approaches to Rotterdam and Amsterdam was quoted before lessons learned from the current process were stated.

The presentation ended with an intriguing reference to the possible use of game theory in Maritime Spatial Planning.

4.5 Overview of session and Questions & Answers

It was asked if there is any guidance for how shipping can be involved in the MSP debate, noting that the Nautical Institute (NI) and the World Ocean Council (WOC) are working towards producing such guidance. There was nothing known but it was agreed that the involvement of shipping is essential. From a starting point of involvement needing to be on a 'case by case' basis, the use of sector workshops was mentioned and that one has to start early in the Maritime Spatial Planning process, whereas it was a general opinion that shipping involvement seemed to come rather late (possibly too late) in the planning stage.

It was noted that neighbouring countries are being asked to provide comment on the UK's Dogger Bank development; what is expected? It was said that the development is far from being decided due to the current boundaries.

It was observed that there is a compelling need for stakeholders to speak to each other and the experience has shown that this is best when starting early. Understanding each other's constraints is important, as is being specific about them.

The question was asked 'To whom does one turn at the international level' to which there was no immediate reply. This prompted the remark that even in the North Sea, arrangements tend to be bi-lateral.

With regard to risk management, it was asked what is the acceptable level of incidents. The response was that there is no clear-cut figure as the assessment would depend on local factors; again the 'case by case' nature of Maritime Spatial Planning was emphasised. There is a need to get a total sector view, in each circumstance, building on the qualitative results of consultation.

5 SESSION 4 – MARKING

This session was chaired by Michael Skov, DMA, Denmark.

5.1 Offshore Renewable Energy Installations (OREIs) in the United States

The presentation was made by Phil Day, NLB on behalf of George Detweiller, USCG.

This presentation has comprehensive speaking notes.

5.2 Use and Future of Virtual AtoN

The presentation was made by Martin Bransby, GLA R&RNAV.

Given the diversity of experience of the delegates, Martin Bransby began with an introduction to Virtual AtoN (VAtoN) before giving the reasons for requiring them. Using four simulator scenarios, the protrayal of VAtoN was shown, both on a GIS and radar displays. General Lighthouse Authority (GLA) trials in Scotland, Ireland and UK were described, ending with a trail at Dungeness and the display on the Marine Traffic website.

With regard to VAtoN portrayal, it was noted that:

- symbols to be used are under discussion in the IMO Safety of Navigation Correspondence Group (CG);
- the CG is due to make its final report at NAV 59 in September 2013;
- further tests will be needed to ensure that the correct symbols are presented once agreement has been reached and suitable display equipment becomes available

The conclusions drawn with regard to simulations and trials were:

- VAtoN will not replace existing systems; they must be associated with navigation warning,

- terminology, positions and names must be harmonised;
- use of lines and hatched areas needs to be investigated;
- there are dangers of target fixation, distraction and traffic compression;
- a Single Isolated Danger mark should only be used on a stationary hazard;
- the area of uncertainty for a non-fixed hazard will increase with time:
  - account should be taken of available sea-room.
- exclusion areas may have knock-on effects;
- the network providing virtual AtoN must have guaranteed integrity;
- display capabilities must be considered:
  - large number of virtual AtoN cannot be interpreted from an MKD showing only positions.
- AIS is mandated for carriage over 300 gross tonnes (Not all users can currently see Virtual AtoN);
- training and awareness will be essential.

Amongst the possible future uses of VAtoN identified were:

- Marking Aquaculture Sites
- Marking OREI
- Wind Farms (each turbine? Polygon/Area?)
- Tidal/Wave (Marking of Sub-sea structures)
- Exclusion zones
- Marking Environmentally Sensitive Sites
- Marking “Marine Parks”
- Migration routes and breeding areas
  - Limited bandwidth - Can’t do everything…. For now

Suggested issues to consider were:

- Single points (like traditional aids)
- Areas of polygons (not like traditional aids!)
- Strings of AtoN (like lines on a motorway?)

5.3 Nautical Institute Guidance on Shipping in Maritime Spatial Planning

David Patraiko, Director of Projects for The Nautical Institute (NI) presented the work that the NI is doing on the issue of representing shipping issues within discussions on Maritime Spatial Planning.

Accepting that Maritime Spatial Planning must take into account a wide range of stakeholder issues, many of whom are unfamiliar with operational, safety and commercial shipping issues, the NI are working with the World Ocean Council (http://www.oceancouncil.org) to produce a template of shipping issues. It is envisioned that individuals with shipping experience can use such a template to assist MSP exercises on a local, national or international basis.

A draft template was published in the NI journal Seaways and an electronic copy is available from the NI at www www.nautinst.org by visiting the MSP Forum. Workshop delegates were invited to provide any feedback on the draft document or how shipping should be represented within MSP to David at djp@nautinst.org by the end of July. It is the NI’s intention to reference IALA documentation for MSP in their template.

5.4 Overview of session and Questions & Answers

The discussion returned to the subject of the lack of adequate engagement of shipping in the Maritime Spatial Planning process. It was noted that perhaps safety of navigation is better represented (easier to find representation) rather than the operational / commercial aspects. Noting that there can be conflict between these two shipping interests, there was also a suspicion that shipping may be taking its concerns as being 'taken for granted'. There are also indications that shipping does not recognise Maritime Spatial Planning as an international issue but one that should be devolved to the national level, where unfortunately the level of experience may not be adequate. However, it was agreed that environmental, energy and aquaculture interests are far better prepared.

It was suggested that there is a need for what is going on in shipping, so that an holistic view of the topic can be represented and understood by other stakeholders and the planners.

There was a robust discussion about Virtual AtoN (VAtoN), in which it was concluded that currently they are best used for relatively short periods (as urged by IMO) and providing that they can be accurately located. The discussion included the reliance of many ships on the Minimum Keyboard Display (MKD) and the inability of other, better-equipped ships still not being able to see all AIS information on a display. It was urged that the discussion about VAtoN wit regard to fixed and moving objects be separated and there was a plea for the harmonisation of the portrayal of VAtoN. It was also suggested that there is a need to create the capacity for AIS to mark a drifting object.

It was noted that IALA had held a workshop on VAtoN in January 2010, from which had emerged IALA Guideline No. 1081 on Virtual Aids to Navigation. This was felt to be of relevance to the workshop.

6 SESSION 5 – REVISION OF IALA RECOMMENDATION O-139

This session was chaired by Michael Skov, DMA, Denmark.

6.1 The draft IALA Recommendation O-139 on the Marking of Man-Made Offshore Structures

The presentation was made by Roger Barker, THLS.

In his short presentation, Roger Barker urged the delegates to contribute to the review of the Recommendation as fully as possible. He covered the process for production of the document, which it is anticipated will be published in mid-December 2013. He then outlined the points where it is felt that the review will need to cover.

6.2 Revision of IALA Recommendation O-139 on the Marking of Man-Made Offshore Structures

The review was lead by Roger Barker, with comments being included as text changes in the latest version of the revised document and with Jorge Teles and Roger Barker taking notes. The work progressed quite slowly and was continued at the start of session 6, the following morning. Considerable valuable input was received from the delegates, for which both Roger Barker and Phil Day expressed their appreciation.

End of Day 2

7 SESSIONS 6 to 8 – WORKING GROUPS

The co-ordinator for the work of the Working Groups was Phil Day, NLB.

The workshop split into three Working Groups (WG):

1 WG1 - Planning process / legislation, lead by Nick Lemon.

2 WG2 - Use of GIS in the planning process, lead by Michael Skov.

3 WG3 - Risk control / Risk acceptance, lead by Ernst Bolt & Roger Barker.

End of Day 3

8 SESSION 9 – WORKING GROUP REPORTS

This session was chaired by Phil Day.

The Chairmen reported on the achievements of their three Working Groups. Each group had produced written input for further consideration at ANM21, with a view to IALA producing a Guideline on Marine Spatial Planning.

Points that arose during discussion included:

- Advice on the application of GIS needs to be generic;
- Does the existing Guideline 1057 on the Use of Geographical Information Systems by Aids to Navigation Authorities need to be reviewed?
- Guideline 1057 will need to be referenced in a Guideline on Marine Spatial Planning;
- A draft Guideline should contain a warning about marine stakeholders being proactive and avoid being complacent about their interests being represented in the Marine Spatial Planning process; other interest groups are already well prepared and active;
- A draft Guideline for AtoN Authorities should aim to do the same as the developing guidance from the Nautical Institute is aiming to do;
- Risk assessment is an extremely broad topic and every opportunity must be taken to urge its use on a ‘case-by-case assessment’ basis;
- Much of the discussion within the Working Group dealing with risk served to confirm existing knowledge and views; there may be a need for further brainstorming to determine new and emerging influences;
- Advice was given that it would be wrong to try and be too specific about corridor width, as again a case-by-case assessment ought to be made;
- A draft Guideline needs to bear in mind the audience that it is aimed at;
- Is it possible to establish acceptable risk levels / figures?
- To avid possible confusion with Maritime Service Portfolio, which is an e-Navigation term, the acronym MSP should not be used but the term Marine Spatial Planning used in full;

It was proposed and agreed that mention should be made of the need for a Guideline on Marine Spatial Planning to the IALA Strategy group, which will meet on 27 May 2013. Pieter Paap and the secretary undertook to do this.

Working documents produced are available from the ftp server in the Workshop / Working Papers directory. Access for non-IALA members can be gained via:

ftp://194.51.37.52

User name ftpworkshop

Password supercell

9 SESSION 10 – WAY AHEAD AND CLOSING OF THE WORKSHOP

This session was chaired by Phil Day.

9.1 Way ahead with IALA Recommendation O-139

Roger Barker and Jorge Teles will work on the draft revised Recommendation inter-sessionally and provide a further revised draft as an input to ANM21; this document will also be sent to all the workshop delegates, as a working paper. It is anticipated that the document will be finalised at ANM21 and should be published by mid-December.

9.2 Workshop conclusions

The conclusions drawn from the holding of the workshop were reviewed and agreed. The conclusions are at Annex E.

9.3 Closing of the workshop

The Chairman thanked all the delegates for their hard work, which will result in a much-improved revised Recommendation O-139 and for providing the foundation for an IALA Guideline on Marine Spatial Planning. The diversity of experience brought to bear on the work undertaken was much appreciated and special thanks were given to the non-IALA members. Phil Day assured the delegates that their work will not be wasted; it will be taken forward at ANM21, with some continuing into the 2014 – 2018 Work Programme.

The Chairman thanked the meeting Secretary and the IALA Secretariat for creating the right ambience for the workshop and the splendid catering. At this point appreciation doe the way in whivh the Chairman and Vice Chairman had handled the workshop.

There being no further business, the Chairman then declared the workshop closed.

10 SOCIAL PROGRAMME

On Tuesday 21 May a Welcome reception was held at IALA.

On Thursday 23 May a workshop dinner was held at Tastevin, Maison Lafitte

ANNEX A LIST OF DELEGATES

Australia **Australian Maritime Safety Authority**

Mr Nick LEMON
Level 5, 82 Northbourne Avenue
Braddon
ACT 2612
Australia

Phone	+61 2 6279 5656
Fax	+61 2 6279 5966
Mobile phone:	+61 417 297 415
e-mail (main):	nick.lemon@amsa.gov.au

Denmark **Danish Maritime Authority**

Mr. Peter DAM
Carl Jacobsenvej 33
2300 Valby
Denmark

Phone	+45 91 37 60 78
Fax	+45 91 37 60 01
e-mail (main):	ped@dma.dk

Danish Maritime Authority

Mr. Michael SKOV
Head of Division
Carl Jacobsens Vej 31
2500 Valby
Denmark

Phone	+ 45 91 37 61 71
Fax	+ 45 91 37 60 01
Mobile phone:	+ 45 20 53 25 84
e-mail (main):	msk@dma.dk

Danish Maritime Authority

Mr Anders KRISTENSEN
Carl jacobsenvej 33
2300 Valby
Denmark

Mobile phone:	+45 2041 42 52
e-mail (main):	avk@dma.dk

DONG Energy

Mr Michael Hejsel HANSEN
Kraftvaerksvej 53
7000 Fredericia
Denmark

Mobile phone:	+45 99 55 25 45
e-mail (main):	mheha@dongenergy.dk

Hans Buch A/S (under Wealth Marine)

Mr Patrick DARRELL
Roskildevet 8-10
2620 Albertslund
Denmark

Phone	+45 43 68 52 82
Mobile phone:	+45 40 30 55 59
e-mail (main):	pd@hansbuch.dk

Estonia **Estonian Maritime Administration**

Mr Kert SUSMALAINEN
Valge 4
Tallinn
Estonia

Phone	+372 620 5683
Fax	+372 620 5606
Mobile phone:	+372 504 3826
e-mail (main):	kert.sysmalainen@vta.ee

Estonian Maritime Administration

Mrs Kaidi KATUS
Valge 4
Tallinn
Estonia

Phone	+372 620 5680
Fax	+372 620 5606
Mobile phone:	+372 524 3829
e-mail (main):	kaidi.katus@vta.ee

Finland **Sabik GmbH**

Mr Christian CAMMIN
Wilhelm-Maybach-Strasse 3
19061
Germany

Phone	+49 385 6767 000
Fax	+49 385 6767099
Mobile phone:	+49 152 2259 5980
e-mail (main):	cc@sabik.de

France **CETMEF**

Mr Jean-Charles CORNILLOU
Technopôle Brest Iroise
BP 5
29280 Plouzané
France

Phone	+33 2 98 05 67 41
Fax	+33 2 98 05 67 67
e-mail (main):	jean-charles.cornillou@developpement-durable.gouv.fr

Gisman

Mr Jean-François MIELCAREK
7 rue Louis Blériot
ZA Toul Garros
56400 Auray
France

Phone	+33 2 97 29 41 21
Fax	+31 2 97 29 41 30
Mobile phone:	+33 6 75 74 12 82
e-mail (main):	jf.mielcarek@gisman.fr

Orolia SAS

Mr Pierre-Jean JANNIN
ZI des 5 Chemins
56520 Guidel
France

Phone	+33 2 97 02 49 49
Fax	+33 2 97 65 00 20
e-mail (main):	pierre-jean.jannin@orolia.com

Orolia SAS

Mr Patrick MOELO
ZI des 5 Chemins
56520 Guidel
France

Phone	+33 2 97 02 49 49
Fax	+33 2 97 65 00 20
Mobile phone:	+33 6 26 25 39 27
e-mail (main):	patrickmoelo@orolia.com

IALA

IALA Secretary General

Mr Gary PROSSER
10 rue des Gaudines
78100 Saint-Germain-en-Laye
France

Phone	+33 1 34 51 70 01
Fax	+33 1 34 51 82 05
e-mail (main):	gary.prosser@iala-aism.org

IALA Technical Coordination Manager

Dr. Mike HADLEY
10 rue des Gaudines
78100 Saint Germain en Laye
France

Phone	+33 1 34 51 70 01
Fax	+33 1 34 51 82 05
Mobile phone:	+44 7887 548 227
e-mail (main):	mike.hadley@iala-aism.org
e-mail (alternative):	advnav@btinternet.com

Ireland **Commmissioners of Irish Lights**

Ms Deirdre LANE
Dun Laoghaire
Co Dublin
Ireland

Phone +353 31 271 55 43
e-mail (main): deirdre.lane@cil.ie

Nautical Institute **Nautical Institute**

Mr David PATRAIKO
202 Lambeth Road
London SE1 7LQ
UK

Phone +44 207 928 1351
Mobile phone: +44 7980 984 038
e-mail (main): djp@nautinst.org

Netherlands **Ministry of Infrastructure and the Environment**

Mr Ernst BOLT
Postbus 5044
2600 GA Delft
The Netherlands

Phone +31 88 7982 508
Fax +316 513 312 06
Mobile phone: +31 6 513 312 06
e-mail (main): ernst.bolt@rws.nl
e-mail (alternative): ebolt@gmx.net

Ministry of Infrastructure and the Environment

Mr Pieter PAAP
PO Box 5044
2600 Delft
Netherlands

Mobile phone: +31 6 466 36 190
e-mail (main): pieter.paap@rws.nl
e-mail (alternative): pieter.l.paap@quicknet.nl

Ministry of Infrastructure and The Environment

Ms Titia KALKER
Rijkswaterstaat Sea and Delta
Lange Kleiwig 34
2288GK Rijswiik
Netherlands

Mobile phone: +31 621 689 718
e-mail (main): titia.kalker@rws.nl

Orga BV

Mr Daniel POWELL
Strickleden 13
3125 AT Schiedam
Netherlands

Phone	+31 10 208 5555
Mobile phone:	+44 77 20 83 81 79
e-mail (main):	d.powell@orga.nl

Ministry of Infrastructure and the Environment
Mr Eric LUCA
Rijkswaterstaat, Directorate Zeeland
Poelendaelesingel 18
Postbus 5014 4330KA Middelburg
The Netherlands

Phone	
Fax	
Mobile phone:	+31 6 52 35 47 71
e-mail (main):	eric.luca@rws.nl

Pintsch Aben B.V.

Mr Alex VENDRIG
Herenweg 24a
NL-3600 AB Maarssen
The Netherlands

Phone	+31 34 65 54 393
Fax	+31 34 65 54 393
e-mail (main):	alex.vendrig@pintschaben.com

Pintsch-Aben Antriebs-und Verkehrstechnik GmbH

Mr. Khaled JABER
Hünxer Strasse 149
46537 Dinslaken
Germany

Phone	+49 2064 602 252
Fax	+49 2064 602 440
Mobile phone:	+49 1722417152
e-mail (main):	khaled.jaber@pintschaben.com

Norway

Norwegian Coastal Administration

Mr. Bjorn Erik KROSNESS
Postboks 1502
NO-6025 Aalesund
Norway

Phone	+47 70 23 10 54
Fax	+ 47 70 23 10 08
Mobile phone:	+47 90 77 24 94
e-mail (main):	bjorn.erik.krosness@kystverket.no

Portugal

Direcçâo de Farois

Lt Cdr Jorge TELES
Estrada Marginal
2720-210 Paço de Arcos
Portugal

Phone	+351 21 446 1666
Mobile phone:	+351 9166 30653
e-mail (main):	santos.teles@marinha.pt

Instituto Hidrografico

Mr Pedro ROBALO
Rua das Trinas, 49
1249-093 Lisboa
Portugal

Phone	+351 210 943 084
Fax	+351 936 350 821
e-mail (main):	santos.robalo@hidrografico.pt

Scotland

Marine Scotland

Mr Phil GILMOUR

Northern Lighthouse Board

Captain Phil DAY
84 George Street
Edinburgh EH2 3DA
Scotland

Phone	+44 131 473 3190
Fax	+44 131 226 3615
Mobile phone:	+44 7785 300 366
e-mail (main):	phild@nlb.org.uk

Northern Lighthouse Board

Mr. Peter DOUGLAS
84 George Street
Edinburgh
EH2 3DA
UK

Phone	+ 44 131 473 3100
Fax	+ 44 131 220 2093
Mobile phone:	+44 7836 787 898
e-mail (main):	peterd@nlb.org.uk
e-mail (alternative):	petali@talk21.com

Scottish Power Renewables

Mr Richard BRITTON
4th floor, 1 Atlantic Quay
Glasgow G2 8JB
Scotland

Phone	+44 141 61 404 16
Mobile phone:	+44 7702 666411
e-mail (main):	Richard.Britton@scottishpower.com

Sweden **Navigation Teknik AB**

Mr Viktor EKSTROM
Box 30 288121
Sweden

Phone	+46 44 850 44
Fax	+46 708 745 5128
Mobile phone:	+46 44 85043
e-mail (main):	viktor@navigationteknik.se

UK **Dong Energy**

Mr Philip FORD
33 Grovesnor Place
London SW1X 7HY
UK

Phone	+44 78 27 833 71 78
Mobile phone:	+44 207 811 54 73
e-mail (main):	phifo@dongebergy.co.uk

General Lighthouse Authorities of UK & Ireland

Mr Martin BRANSBY
The Quay
Harwich
Essex
UK

Phone	+44 (0)1255 245 042
Mobile phone:	+44 (0)7770 265 652
e-mail (main):	martin.bransby@gla-rrnav.org

Marine Management Organisation

Mr Tom WOOLEY

Trinity House Lighthouse Service

Capt Roger BARKER
Diretor of Navigational Requirements
Tower Hill
EC3N 4DH
UK

Phone	+44 207 481 6917
Mobile phone:	+44 7785 111 519
e-mail (main):	roger.barker@thls.org

Trinity House Lighthouse Service

Capt Nick DODSON
Tower Hill
London
EC3N 4DH
UK

Phone	+44 207 481 6900
Fax	+44 207 480 7662
Mobile phone:	+44 7785 111 519
e-mail (main):	nick.dodson@thls.org

ANNEX B WORKING GROUP PARTICIPANTS

Working Group 1 Planning process / legislation

	Name	Organisation / Country
1	Nick Lemon (Chair)	AMSA / Australia
2	Tom Woolley	MMO / UK
3	Jean- Charles Cornillou	CETMEF / France
4	Phil Day	NLB / Scotland
5	Nick Dodson	THLS / England & Wales
6	Phil Gilmour	Marine Scotland
7	Tatia Kalker	RWS / The Netherlands

Working Group 2 Use of GIS in the planning process

	Name	Organisation / Country
1	Michael Skov (Chair)	DMA / Denmark
2	Peter Dam	DMA / Denmark
3	Martin Bransby	GLA R&RNAV / UK & Ireland
4	Kert Susmalainen	Estonian Maritime Administration
5	Pieter Paap	RWS / The Netherlands
6	Pedro Robalo	Instituto Hidrografico / Portugal

Working Group 3 Risk control & Risk acceptance

	Name	Organisation / Country
1	Roger Barker (Co-chair)	THLS / England & Wales
2	Ernst Bolt (Co-chair)	RWS / The Netherlands
3	Christian Cammin	Sabik Oy / Finland
4	Patrick Darrell	Hans Buch A/S / Denmark
5	Peter Douglas	NLB / Scotland
6	Viktor Ekstrom	Navigation Teknik AB / Sweden
7	Khaled Jaber	Pintsch Aben / Germany
8	Pierre Jean Jannin	Oriala SAS / Kannad / France
9	Kaidi Katus	Estonian Maritime Administration
10	Anders Viborg Kristensen	DMA / Denmark
11	Bjoern Erik Kroness	NCA / Norway
12	Deidre Lane	CIL / Ireland
13	Eric Luca	RWS / The Netherlands
14	Patrick Moelo	Oriala SAS / Kannad / France
15	David Patraiko	NI / UK
16	Daniel Powell	Orga BV / The Netherlands
17	Jorge Teles	Direçao de Farois / Portugal
18	Alex Vendrig	Pintsch Aben / Germany

ANNEX C WORKSHOP PROGRAMME

IALA Workshop on the Application of Aids to Navigation (AtoN) within Marine Spatial Planning

21 – 24 May, 2013

IALA
10 rue des Gaudines
78100, St Germain en Laye
France

Workshop Programme

Day 1 – Tuesday 21 May, 2013

Time	***Activity***	***Presenter***	***Chair***
1200 - 1300	**Registration**		
1300 - 1500	**Session 1 – Setting the scene**		**Phil Day, NLB**
1300 - 1305	Welcome from IALA	Gary Prosser, Secretary-General, IALA	
1305 – 1310	Introductions		
1310 - 1315	Safety & Administration brief	Mike Hadley, IALA	
1315 - 1330	Purpose	Phil Day, NLB	
1330 - 1410	Presentation – Overview of Offshore Renewable Energy Infrastructure (OREI) development N. America, Europe, global	Peter Douglas, NLB	
1410 - 1440	Presentation - OREI technology	Richard Britton, Renewables UK	
1440 - 1500	Overview of session and Q and A		
1500 - 1530	**Refreshment Break**		
1530 - 1730	**Session 2 – Case Studies**		**Michael Skov, DMA**
1530 - 1610	North Sea experience (Includes use of GIS in Project ACCSEAS)	Ernst Bolt, RWS, Titia Kalker, RWS & Pieter Paap, RWS	
1610 - 1650	Case study – Australia	Nick Lemon, AMSA	
1650 - 1730	Overview of session and Q and A		
	End of day 1		

Reception at IALA

1730 – 1930

Drinks and Finger Buffet will be served

Afterwards Free evening

Day 2 – Wednesday 22 May, 2013

Time	***Activity***	***Presenter***	***Chair***
0900 - 1100	**Session 3 – The planning Process**		**Michael Skov, DMA**
0900 - 0905	Administrative Details	Mike Hadley, IALA	
0905 – 0925	Presentation – Marine Planning – England overview	Tom Wooley, Marine Management Organisation	
0925 – 0950	Presentation – Marine Planning and Licensing Policy - Scotland	Phil Gilmour, Marine Scotland	
0950 - 1030	Presentation – Risk control / mitigation	Roger Barker, Trinity House	
1030 - 1050	Stakeholder involvement	Titia Kalker, RWS	
1050 - 1100	Overview of session and Q and A		
1100 - 1130	**Refreshment Break – Group Photograph**		
1130 - 1300	**Session 4 - Marking**		**Michael Skov, DMA**
1130 - 1200	Presentation – Offshore Renewable Energy Installations in the USA	Phil Day, NLB for George Detweiller, USCG	
1200 - 1230	Presentation – Use and future of Virtual Aids to Navigation	Martin Bransby, GLA R&RNAV	
1230 - 1250	Presentation – Nautical Institute guidance on MSP	David Patraiko, NI	
1250 - 1300	Overview of session and Q and A		
1300 - 1430	**Lunch**		
1430 - 1730	**Session 5 - amend O-139 - Plenary**		**Michael Skov, DMA**
1430 - 1445	Presentation – draft IALA Recommendation O-139 on the Marking of Man-Made Offshore Structures	Roger Barker, THLS	
1445 - 1545	Revision of IALA Recommendation O-139 on the Marking of Man-Made Offshore Structures	Roger Barker, THLS	
1545 - 1615	**Refreshment Break**		
1615 - 1720	Revision of IALA Recommendation O-139 on the Marking of Man-Made Offshore Structures	Roger Barker, THLS	
1720 - 1730	Overview of session and Q and A		
1730	**End of day 2**		

Free evening

Day 3 – Thursday 23 May, 2013

Time	***Activity***	***Presenter***	***Facilitator***
0900 - 1030	**Session 6 – Working Groups**		**Phil Day, NLB**
0900 - 0915	Break into Working Groups (Plenary)	Mike Hadley, IALA	
0915 - 1030	WG1 Planning process / legislation - recommended step by step process	Nick Lemon, AMSA	
0915 - 1030	WG2 Use of GIS in the planning process e.g. bathymetry, traffic density, other constraints	Michael Skov, DMA	
0915 - 1030	WG3 Risk control / Risk acceptance e.g. channel widths, exclusion areas, VTS, application of AtoN	Ernst Bolt, RWS & Roger Barker, THLS	
1030 - 1100	**Refreshment Break**		
1100 - 1330	**Session 7 – Working Groups**		**Phil Day, NLB**
1330 - 1430	**Lunch**		
1430 - 1700	**Session 8 – Working Groups**		**Phil Day, NLB**
1700	**End of day 3**		

Workshop – dinner

Transport: Starting from Hotel du Coq at 1915, then Henri IV and l'Hermitage des Loges
Venue: Tastevin, Maison Lafitte
Time: 2000
Dress Code: Smart Casual

Day 4 – Friday 24 May, 2013

Time	*Activity*	*Presenter*	*Chair*
0900 - 1100	**Session 9 – Working group reports - plenary**		**Phil Day**
0900 - 0905	Administrative details	Mike Hadley, IALA	
0905 - 1000	Working Group reports	Nick Lemon, AMSA, Michael Skov, DMA, Ernst Bolt, RWS & Roger Barker, THLS	
1000 - 1030	**Refreshment Break**		
1030 - 1130	**Session 10 – Way ahead and closing of workshop**		**Phil Day**
1030 - 1100	Way ahead with IALA Recommendation O-139	Roger Barker, THLS	
1100 - 1120	Workshop conclusion	Phil Day, NLB	
1120 - 1130	Closure		
1200	**End of Workshop**		

ANNEX D WORKSHOP INPUT AND OUTPUT PAPERS

Together with the presentations made during sessions 2 – 7, the following papers were input to the workshop.

1 INPUT PAPERS

1 Latest version of the revised IALA Recommendation O-139 on the marling of Man-made Offshore Structures.

2 OUTPUT PAPERS

1 Workshop draft report (open for comment until 7 June 2013).

2 A draft revised IALA recommendation O-139 was sent for inter-sessional work before being submitted as an input paper to ANM21 and distribution to the workshop delegates.

3 The working papers from the three Working Groups were posted to the ftp server and will be inputs to ANM21.

ANNEX E WORKSHOP CONCLUSIONS

1 The attendees of the workshop worked cohesively together and were very productive.

2 The ANM Committee members appreciated the attendance and participation by the non-member delegates.

3 The quality and relevance of the presentations provided to the workshop were appreciated by all attendees and set the scene for the work that followed.

4 During the presentations it became apparent that:

- Early and widespread stakeholder involvement and buy in to the Marine Spatial Planning process is essential;
- Marine Spatial Planning requires a single point of leadership for facilitating engagement in the process and assist with inter-stakeholder co-operation at the national and international level.
- A GIS is considered to be an essential tool for supporting the Marine Spatial Planning process.
- A GIS webservice to facilitate consultation and promulgation of information to assist and improve the quality of decisions made in the process of formulating a Marine Spatial Plan is recommended.
- Geographical information that aligns with standards contained in the IHO's developing S-100 Geospatial Information Registry will be increasingly helpful for Marine Spatial Planning, noting that IALA is working on two S-100 domains, VTS and AtoN.
- Marine Spatial Planning benefits from the sharing of information across international borders;
- IALA members are recommended to participate in the Marine Spatial Planning process and encourage other relevant stakeholders to liaise with the appropriate Marine Spatial Planning body;
- It is suggested that a study on the potential impact on radar and radio transmissions and coverage be considered during the planning process for a windfarm;
- Notwithstanding their limitations, which should be taken into account, the use of virtual AIS AtoN may assist in the promulgation of important safety information during the construction phases of OREIs, on a case-by-case basis, as determined by the Competent Authority;
- Risk mitigation control measures, such as VTS and other AtoN, may need to be amended as a Marine Spatial Plan continues to develop, to ensure safe and efficient use of the sea for all stakeholders.