

9th CSPWG MEETING
Seoul, Republic of Korea, 13-16 November, 2012

Paper for Consideration by CSPCWG

Definitions of 'major' lights; sector width of direction lights

Submitted by:	UK
Executive Summary:	This provides an update on progress with outstanding WG8 actions on lights, specifically the definitions of 'major' lights and 'direction' lights
Related Documents:	S-4, S-12, INT1
Related Projects:	None

Introduction / Background.

Action 14 at WG8 was: Sec to research further the issue of 'major' lights and, if required, propose any changes to S-4 and INT1 by correspondence.

Action 36 at WG8 was: Sec to further research into defining Dir lights, in consultation with IALA and HDWG. (Some nations regard an angular maximum width for the leading sector as 3°, whereas existing IALA definitions only refer to a 'narrow arc of the horizon' - or 'very narrow' in the French definition.)

The Secretary has researched these subjects and engaged in a significant amount of correspondence with IALA representatives, without finding a definite resolution.

IALA has agreed to refer these issues to the IALA Aids to Navigation Management (ANM) Committee meeting and invited the CSPCWG Secretary to attend to present the topics. Unfortunately the meeting is in Brisbane Australia (which would be a long way to travel for only two topics) and is anyway at exactly the same time as our WG9 meeting.

As a more realistic option, Secretary was invited to meet with Captain Phil Day of the Northern Lighthouse Board (Chairman of the IALA ANM committee) and Captain Roger Barker of Trinity House (Chairman of the IALA ANM Operations Working Group); both are located in UK. This was intended to work out a solution likely to be acceptable to IHO and IALA which could be presented simultaneously at the respective meetings. To date, these meetings have not taken place.

Analysis / Discussion.

1. Major lights.

CSPCWG originally considered the definition of major lights following DIPWG decision to consider lights with nominal range of 10 Nautical Miles or greater as major lights, for ENC purposes only. Possible sources considered included:

- The use of bold in LL for lights with a range of 15M or more (but it is nowhere stated that this defines a major light).
- The statement in S-4 B-472.1: 'Major lights (ie lights intended for use at sea, usually with a range of 15 miles or more, and in outer approaches to harbours)'. Although now approved by IHO MS, this 'definition' was simply an attempt by Chairman and Secretary to provide something a bit more useful than the vague statement which existed prior to the revision of this part of S-4; it had no official basis. There are other references to major lights in S-4, but none define the term.

- The statement in the draft revision of S-4 B-470.4a (WG Letter 08/2012): 'A major light is not defined by range, but by the importance of the light in the context of the chart - a matter of cartographic judgement'.
- There is no definition of major light in the IALA dictionary, and it appears there never has been. IALA do categorise Aids to Navigation as 1, 2 and 3 according to navigational significance. Category 1 AtoN are 'of vital navigational significance', for instance 'considered essential for marking landfalls, primary routes, channels, waterways, dangers or the protection of the marine environment'. Leaving aside the additional difficulty of defining a primary route, it is probable that this comes closest to a definition of a major light (or other AtoN).

The last three bullets above have some commonality and avoid an arbitrary 'rules-based' application of nominal range.

A suggested definition in WG8 paper 08.6A was:

- **Major light.** A light, generally with a nominal range of 10 Nautical Miles or greater, intended to be the first to be seen during an approach from the open sea to a part of the coast or that indicates the approach to a harbour, river or estuary. Air navigation lights and lights marking energy production structures (eg platforms, turbines) are excluded from this definition.

One problem is that on a large-scale chart, say of a channel between islands, the most significant lights would not be covered by this definition.

Another option would be to draw on the 4th bullet above, eg:

- **Major light.** A light of vital marine navigational significance which is considered essential for marking landfalls, shipping routes, waterways providing access to ports, dangers and for the protection of the marine environment.

Should the definition refer in some way to charting context? Lights which would be 'major' or 'significant' on a large-scale chart may not be on a small-scale chart.

2. Direction lights.

The existing definition in the IALA dictionary is:

- 'A signal light designed to show a signal of a given character within a narrow arc of the horizon, and used to indicate a particular direction. It may also indicate an arc of the horizon to each side by other characters'.

Note: in French the term 'feu de guidage' refers to a direction light in which a very narrow arc of the horizon is used to indicate a particular direction, and an arc of the horizon to each side must be indicated.

These are different in certain respects (eg whether or not the arcs on each side of the narrow arc must or may be indicated), but the French INT1 only refers to 'feux directionnels'.

Whichever definition is used, 'narrow' or 'very narrow' is subjective. UK has interpreted this as 3° or less. However, it is evident that some countries designate lights with much wider leading sectors as 'Dir'. AU would like a clearer definition, as some local authorities were requesting AU to chart all sector lights as Dir. Can this be clarified, eg by an angle of arc such as 3°?

Conclusions.

Awaiting meeting [September 12] with UK's technical specialists and IALA representatives (Introduction refers).

Recommendations.

None yet.

Justification and Impacts.

1. Removal of confusion.
2. Changes required to S-4, S-12 (ownership unknown), INT1 and possibly national Lists of Lights.
3. May need to revise some charted light descriptions?

Action required of CSPCWG.

The CSPCWG is invited to:

Consider the above and advise whether the recommended definitions are acceptable.

Note: the outcome will need to be approved by IALA and then possibly be forwarded to HDWG for inclusion in S-32.