Corporate 💻





Baltic Marine Environment Protection Commission

# The HELCOM Visual Identity Guide

Ingredients for the layout of HELCOM publications and documents





Baltic Marine Environment Protection Commission

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## 1. Design principles

#### The HELCOM design is...

#### Identifying

The design language is an unmistakable visual identifier of HELCOM. It takes cues from HELCOM's activities and the Baltic Sea environment.

#### ٨ Unifying

One common design language unites an array of various action areas, projects, teams, ideas, approaches. It portrays HELCOM as a diverse yet cohesive and well-organised entity.

#### ٨ Engaging

HELCOM's design fosters a dialogue and triggers actions. It engages users to discover more about HELCOM and the Baltic Sea environment.

#### ٨ Fresh

The design is fresh and upbeat, echoing HELCOM's innovative solutions and enthusiasm to address the challenges of the Baltic Sea.

#### ٨ Clear

The design adds clarity and structure to the content. It eases the navigation in documents and facilitates the comprehension of HELCOM's messages.

#### ٨ Modular

The design is versatile and flexible. It caters for all HELCOM communication tools and works at all scales, both digital and print, still and animated.

#### ▲ Easy-to-use

User-friendly, the design is accessible and easy to implement, regardless of user skill levels.

#### ▲ Futureproof

The design is future-ready, withstanding trends and fashions. Simple and timeless, it is ready for new technologies and standards.









### 2. Logo



#### 2.1. Standard logo

The HELCOM is constituted of the **map of the Baltic** Sea (1), ten dots representing each Constituent **Party** (2) – Denmark, Estonia, the European Union, Finland, Germany, Latvia, Lithuania, Poland, Russia and Sweden – and the logotype "**HELCOM**" (3). The standard colour of the logo is HELCOM blue.

#### 2.2. Alternative logo versions



The logo can also be used in HELCOM grey (see colours), white, black and greyscale.

As a general rule, these versions should only be used when the standard blue version won't display well such as on images and dark backgrounds (for the white version) or black and white print jobs.

### HELCOM



#### ▲ Version for sizes below 15mm

When the standard logo diameter is smaller than 15mm, the horizontal version with the added "HELCOM" logotype is to be used instead for better legibility.

This version can also be used when lower resolution or display mode might affect legibility of the standard logo, such as in web/digital applications or presentations.



#### 2.3. Logo protection area (standard logo)



\rm Logo areas

The logo has two protection areas to make it immediately noticeable on documents:

(1) Minimum distance to the border/edge of a document. Size: 1 x "a"

(2) **Protection area:** shouldn't contain any text or graphic elements. When the logo is placed on an image, it should be on an even and quiet area of the image, such as a sky or the sea, but never on or close to any object. **Size:** 2 x "a", measured from the logo's outer circular boundary.

**The distance "a"** can be calculated in two ways:

 (3) a=1/3 d (one third of the logo's diametre)
 (4) a = the distance between the bottom of the "H" and the "C" of "HELCOM"

#### Exceptions

Exceptions to the protection area rule can be made when placing the logo on documents containing other partner logos or when HELCOM is not the main author of the document.



The seagull encroaches on the protection area, and the border is too close.



The seagull is out of the protection area, the logo's distance to the border is good.





#### 2.4. Logo protection area (horizontal logo)



(1) **Protection area: 1 x b**, measured from the logo's outer bounding box (2) – the smallest possible rectangle that encompasses the whole logo. The distance "b" is the minimum distance to document borders and any other layout elements.

When the logo is placed on an image, it should be on an even and quiet area, such as a sky or the sea, but never on or close to any object.

#### (3) Distance "b" = the height of the "H" of HELCOM logotype



The seagull is out of the protection area, the logo's distance to the border is good.





#### 2.5. Logo addendum



**Baltic Marine Environment Protection Commission** 

▲ "HELCOM" is short for "Helsinki Commission" which, in turn, is already a simplification of "Baltic Marine Environment Protection Commission", the official name of the organisation.

▲ On key documents, and whenever it is important to clearly identify the organisation, include the logo addendum (1) with the official name.

▲ To avoid confusion and underline the fact that HELCOM and the Baltic Marine Environment Protection Commission are one and the same organisation, place the addendum **close to the logo**, but always respecting the logo's protection area. ▲ The "wave line" (2) can be combined with the logo addendum. When using the "wave line", make sure it is the same length as the logo's diameter.

▲ Font specifications of the addendum for standard publications: Share regular; size: 12pt; leading: 14pt; kerning: optical; tracking -40; colour: HELCOM blue. When the Share font is not available, use the image version. As a last resort, use the Calibri font.

▲ On subsequent pages, such as on Word documents or PowerPoint presentations, the logo can be omitted and the addendum used as standalone.

▲ Alternatives: to ease layout of communication material, different alignments and line breaks can be used. When using the "wave line", make sure it is the same length as the logo's diameter.

Baltic Marine Environment Protection Commission

Baltic Marine Environment Protection Commission

Baltic Marine Environment Protection Commission

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**Baltic Marine Environment Protection Commission** 

Baltic Marine Environment Protection Commission







x Don't disort.



x Don't rotate.



x Don't add effects.



**x** Don't change the colour.



**x** Don't fill or add borders.

**x** Don't modify.



### 3. Fonts

#### 3.1. Title fonts

Titles:

Share	
H1 - 84pt	
H2 - 52pt	
H3 - 32pt	

# **Ipsusapidit** Ipsusapidit

H4 - 20ptIpsusapiditH5 - 12ptIpsusapiditH6 - 10ptIpsusapiditH7 - 9ptIpsusapidit (with rules above and below)

▲ Share combines a contemporary look with a corporate and technical feel, suited for both print and digital publications. Its narrow average character width is ideal for titles, especially in higher font sizes where it saves page real estate without compromising on legibility.

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#### Body (sans): Source Sans Pro

Size: 9pt (10pt) Leading: 11pt (12pt) Kerning: metrics Tracking: 0 to -60

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#### Body (serif): **Utopia**

Size: 9pt (10 pt) Leading: 11pt (12pt) Kerning: metrics Tracking: 0 to -60

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▲ Utopia, a serif font, works well with Source Sans with which it bears similarities. It is a good alternative when a serif font is required, either to create contrast – for instance for quotes – or to improve legibility in print publications. Utopia should only be used as the secondary body font, as most HELCOM publications will be viewed on a screen.

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#### 3.3. Captions and footnotes <sup>1</sup>

For captions and footnotes use Share. Its narrow character width and good legibility at low sizes is ideal for displaying captions and footnotes in often limited space.



**Caption specs** Font: Share; Size: 7pt; Leading: 9pt; Kerning: metrics; Tracking: 0 to -60

#### 3.4. Alternative fonts

#### ٨ Titles

When Share is not available, use Calibri or Arial (in that order) for any title work.

#### **A** Body (sans)

When Source Sans is not available, use Calibri or Arial (in that order) for body text.

#### **A** Body (serif)

When Utopia is not available, use Times New Roman for body text.

#### 3.5. Web specific fonts

#### \rm Web

Share and Source Sans are available in the Google Font directory and Adobe's Edge/Typekit, along with all the other alternative fonts. Utopia is only available in Adobe Typekit, so Times New Roman should be used instead if access to this service is not available.

#### ٨ Web-safe

When web-safe fonts are required – for instance in e-mail embedded communication material such as newsletters, save-the-dates or newsflashes – use Arial to substitute both Share and Source Sans, and Times New Roman to substitute Utopia. This is to permit maximum cross-platform compatibility and readability. Any titles or text elements in other fonts need to be inserted as images, preferably in JPEG or GIF formats. The use of PNG format is not advised, as many older clients still in use don't support it.

#### 3.6. PowerPoint and Word

Use Calibri for PowerPoint and Word documents, both for titles and the body. Be aware that even if the primary fonts are available on your computer or device, this might not be the case on the one used to display the document. Calibri is a standard MS Office font and will therefore display in the majority of cases.

#### 3.7. Official language and editing

The HELCOM official language is English. For overall consistency and since the EU is part of HELCOM, use British English. Remember to set your spell and grammar checking to British English — it is often not the default setting.



<sup>1.</sup> Footnote specs Font: Share; Size: 7pt; Leading: 9pt; Kerning: metrics; Tracking: 0 to -60

### 4. Colours



#### 4.1. Primary colours

The main primary HELCOM colour is blue, in a shade similar to navy blue. The HELCOM blue is also the colour of the logo in its standard version. The second primary colour is a turquoise green. Two shades of grey, one light and one dark, complement the primary colours, underscoring the corporate nature of HELCOM.



#### 4.2. Secondary colours

The main secondary colours are derived from the primary blue and green and reflect the colours of the Baltic Sea region, both land, sea and air.

The secondary colours come in saturated and desaturated versions.

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#### 4.3. Saturated secondary colours



#### 4.4. Desaturated secondary colours



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#### 4.5. Colours in MS Office applications

For simplicity reasons, when using MS Office applications such as Word or PowerPoint, use the **Theme Colour "Office"** (1), usually installed as default or selectable from the "Design" tab, and choose "**Blue, Accent 1, 25% darker**" (2) as the main HELCOM blue colour. If "Blue, Accent 1" is not available, choose the Standard Colour "Blue". Blue should mainly be used for titles.

The other hues of "blue, accent 1" as well as all shades of grey can be used for text boxes, backgrounds, graphs, etc. Preferred colour for text is black on white background.

For additional colours, choose between the greys "White, Background 1, darker 15%" and "White, Background 1, darker 35%" (3), and the **Standard Colours** (4) "Light Blue" (preferred choice), "Red", "Orange" and "Light Green". The contrasting colours should be used sparingly, and only for highlights.

#### 4.6. Colour profiles in Adobe CC

In Adobe CC products, set the colour profiles to "Europe General Purpose 3". When setting up colour profiles and working spaces, use sRGB (for RGB) and FOGRA39 (for CMYK) if not already the default.

The colour profiles above are only meant for design purposes and on-screen publishing. If a design is intended to be printed, exclude all profiles during export (especially to PDF format) and let the printing house manage the colour settings.









### 5. Identity elements

Identity elements play an important role in HELCOM's visual personality. Recurrent items, they are clear identifiers of the HELCOM brand. Of simple design, they are easily implementable across the whole range of HELCOM communication tools.

#### 5.1. Theme Icons

The icons designate a specific HELCOM action area or BSAP goal. They help creating a consistent design language and fast-track production of communication tools.





Agriculture





Fisheries



Hazardous

substances



Industrial & municipal releases

Marine protected areas





Maritime spatial Monitoring & assessment



planning

Shipping

Response to spills



& noise



Marine litter







Maritime activities

#### 5.2. Theme bars

The theme bar is constituted of three elements: a theme icon (1), a colour bar (2) and a title (3) – usually the name of the action area or BSAP goal.

The icon is white on a saturated colour square. The bar is filled with a contrasting or complementary desaturated colour.

Theme bars are used on publication covers or social media elements such as postcards or infographics.

For social media use, indicate the title with a hashtag and without spaces between words.



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#### 5.3. Filler bars

The bars (4) add a corporate feel and dress up the design: "HELCOM is a serious institution". They also help connecting and blending HEL-COM communication elements with other tools that might have a different visual identity such as social media platforms. Filler bars are placed to the left and/or right margins of a document.



#### 5.4. Wave line

The "wave line" (5) separates different elements on a page or document and reminisces of the gentle waves of the Baltic Sea.

#### 5.5. Punctum

The three punctums – the **wave bullet** (6), the triple wave (7) and the rectangle (8) – are recurrent elements that "spice up" a page, catch attention and contribute towards HELCOM's unique visual identity. They improve legibility of and ease navigation in documents.



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### 6. Images

#### 6.1. Image selection guidelines

▲ Colour: images should contain a dominance of the HELCOM main colours – blue, green or grey (any hue and shade).

▲ Less is more: images should not be too rich in details. They should display only one subject or illustrate only one concept.

▲ Impact: Images should be chosen for their graphic impact. Images with *bokeh* effect – where the subject is sharp and in focus, and the background blurred – work best.

▲ Multiple topics: When several topics need to be illustrated – for instance on a cover – choose an image that illustrates best the dominant subject. Abstain from collages or grouping several images which will only add complexity and confusion.

→ Product of the Baltic Sea: generally, only images from the Baltic Sea region should be used, even when using symbolic images.

#### 6.2. Captions

No image without description: only use images for which a caption can be provided, ideally containing a precise location, date and description. Captions need to be placed close to the image or in a way that clearly locates the described image.

#### 6.3. Copyright

To avoid legal issues, copyright and usage conditions should always be cleared before using an image. Only use images for which HELCOM has the rights or that are in the public domain. Even when an image is originally intended for internal purposes only – such as slideshows – many documents end up being shared further and/or posted on the internet which might cause copyright conflicts. Copyright mentions can be placed either directly near the image or grouped on a dedicated copyright page. The dominance of blue and green and the blur effect make this image a good choice for HELCOM publications.



One subject (gulls), high graphical impact, blue and grey colour tones: ideal for HELCOM publications.



Too many details, low graphical impact: poor choice for HELCOM publications.



Collages of too many elements and effects lead to confusion and noise: not recommended for HELCOM publications.





### 7. Graphs & charts

#### 7.1. In general

Less is more: for good readability, avoid "chart junk" and "chart noise" such as unnecessary effects, too many different colours or an overload of variables and data. Stay as simple and clear as possible.

Graphs and charts should immediately deliver their essence at the reader's very first glance. When a graph or chart becomes too complex, prefer using tables instead. Graphs don't have to be boring. They are both conveyors of information and attention grabbers. Adding some HELCOM icons might facilitate identification and lecture, on top of making the page more attractive and interesting.



#### 7.2. Pie charts

Pie charts only work well when displaying a few data items such as progress indication or percentages, or comparing a low number of items.

When the chart exceeds a certain number of data items and becomes unintelligible, use other chart types instead.

#### 7.3. Creative charts

Pie charts don't necessarily have to be round. Interesting and creative results can be achieved using the HELCOM icons, especially for low numbers of variables, quantifications and other numeral comparisons. Nevertheless, these graphs need to be kept simple and legible and match the overall design language.



In 60% of the Baltic Sea, herring stock size achieves good status.



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#### 7.4. Bar charts

For comparison purposes, prefer bar charts. Use vertical bar charts for ordinal variables (numbers, figures) – that are ordered in a sequence, that follow a natural order or pattern. When comparing nominal variables (names, substantives) – for instance different countries, regions or species – use horizontal bar charts as this type eases comparison between names.

#### Table B3.1. Annual value of marine and coastal recreation and average number of annual recreational trips to the Baltic Sea. Data from the year 2010. Source: Czajkowksi et al. (2015).



7.5. Histograms & line charts

To display progress and trends along a timeline, use vertical histograms, line charts or area charts. Whenever possible, prefer line charts as they are simpler and carry less "chart junk".

When displaying large data sets, add a grid – preferably a dotted line in light grey so as to not interfere with the chart data – to the chart to ease legibility.

Data points should be marked with a circle, as this makes the chart both easier to read and look friendlier in smoothing out the spikes.

Stroke width: the data line is 1pt (any saturated HELCOM colour), the axis 0.75pt (HELCOM dark grey) and the grid 0.5pt (HELCOM light grey, dotted).



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### 8. Tables

### Table B3.1.Annual value of marine and coastal recreation and averagenumber of annual recreational trips to the Baltic Sea.

Data from the year 2010. Source: Czajkowksi et al. (2015).

Country	Average annual recreation visits to the Baltic Sea per person	Anual value of Baltic Sea recreation visits (in million EUR)	Country population (in million)	Value of recreation visits per year per inhabitant (in EUR)
Denmark	6.0	720	5.7	126
Estonia	1.8	150	1.3	114
Finland	4.0	1040	5.5	189
Germany	1.2	5140	82.6	62
Latvia	2.6	110	2.0	55
Lithuania	1.7	190	2.9	66
Poland	1.1	2070	38.0	54
Russia	0.5	940	144.3	7
Sweden	6.5	4 4 3 0	9.9	447
Regional average	2.8	_	-	124
<b>Regional total</b>	_	14790	-	-

#### 8.1. General rules for table design

When having to present a lot of data, tables are usually the most reader-friendly way to do so.

For best legibility, keep the table as open as possible. Instead of using a classic table layout with solid borders and a solid grid, use white and light backgrounds for each alternating row. This will help guide the eye and facilitate browsing of the table data.

Do not delimit the columns with solid lines. Use ample spacing instead: in most cases, the content itself will already function as a delimiter. Solid lines will only add unnecessary noise to the table.



### 9. Layout templates

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#### Publication cover (A4 size)



(1) **Logo with addendum:** use a 30mm diameter for the logo, placed top right of the page at 10mm from the border. The addendum is placed according to the logo protection area.

(2) **Title:** use H2 and H3 title sizes (see fonts) for title and subtitle, balanced along the line created by the rectangle punctums and the theme icon.

(3) **Unit/group title:** the HELCOM unit or group publishing the document.

(4) Action area bar: HELCOM action area, BSAP goal etc., with corresponding icon.

(5) **Side bar:** graphic element that serves as visual identifier of HELCOM documents and delimiter of the title area.

(6) **Code and date:** if applicable, this area contains the documents metadata such as document code, date etc.

(**7**) **Cover image:** one image with strong graphic impact that best illustrates the publication's subject (see image guidelines).

(8) Website signature: HELCOM website (active in PDF documents)

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For the inside pages of publications, use grid systems to align and organise the different design elements such as text boxes, images, tables and charts.

Depending on the design needs and content characteristics, and to allow for maximum design flexibility, use any grid system ranging from 7 to 12 columns.

Textboxes and other assets can span over several columns. For instance, if the publication should contain three text columns – a classic A4 design choice – choose a grid system of either 9 or 12 columns, with textboxes then spanning over three or four columns respectively.

#### **Grid specifications**

Margins: top 15mm, bottom 20mm, left 20 mm, right 20mm. Side bars of 10mm width can be placed next to the side margins (see design elements) if needed.

Gutter: 5 mm between column

Baseline grid: as a standard setting, for body text 9pt, use a baseline grid of 11 pt. For body text 10pt, use a baseline grid of 12pt. To adjust baseline grid options in InDesign, go to "Preferences>Grids"





#### Social media postcards







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#### "HELCOM is a true example of successful regional ocean governance."

- Karmenu Vella (Commissioner for Environment, European Commission) during the HELCOM Ministerial Conference 2018 held in Brussels on 6 March 2018.

helcom.fi



#### **Designing social media postcards**

▲ One key message (1) that is easy to highlight and fits in one short sentence.
Font: Share.

▲ One photo or illustration (2) that conveys the key message and is immediately graspable at first sight. When using a photo, it should fill the entire frame and contain enough "quiet areas" to place all the elements such as text and logo.

→ Background (3), in an unsaturated colour or grey (avoid white). NB: When using full frame images, a background is not needed.

▲ Theme bar (4) which contains a hashtag – usually the action area attached to the word "Baltic" – and the theme icon.

▲ Filler bar (5), in white, on the left side.

**∧ Copyright** (6) if applicable.

**HELCOM logo** (7) in its horizontal version.

✓ Signature (8) containing of the rectangle punctum and the website address "helcom.fi".

#### **Dimensions of artwork**

▲ Ratio: The preferred ratio is 16:9, horizontal. Currently the best "one-size-fits-all" option, it accommodates most social media platforms, both desktop and mobile versions. This ratio ensures that the artwork is less likely to be cropped at the edges and will therefore display as is.

▲ **Dimensions:** for best results, choose any multiple of 16 combined with the 16:9 ratio. A good standard size would be **1024 x 576 pixels** at a resolution of 72 ppi. This is a good compromise between image quality, ability to display well on most platforms and file size.

▲ File format and compression: for still images, use .JPG, at a compression rate between 40% and 60%. For images that are 1024 x 576 pixels, aim at obtaining a file size of 100 KB or less.

#### Recommendations

▲ Hashtag: even if the postcards already contain the hashtag, always mention it separately in the social media post for it to be referenced.

▲ Links: always link the post to a relevant section of the HELCOM website that provides more information on the subject.

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Unit/Group



# Fici autem

Cabor rerundenis et quam dolorro earum et, et essim volent.



Baltic Marine Environment Protection Commission







addressed sanitary concerns of sewage – but not nutrient content. At the same time, the Baltic coastal countries have applied increasingly stringent nutrient limits to sewage dis-While not the biggest source of nutrients

in the Baltic Sea, ship sewage is not insignificant. With over 7.15 million person days spent on cruise ships in the Baltic Sea, and 40 million inter- national ferry passengers per year, proper sewage disposal is important to protect the health of the Baltic Sea.

Under the general IMO MARPOL Annex IV regulations, sewage can be discharged when 12 nautical miles from the nearest land.

Many environmentally conscious ships have voluntarily avoided this, discharging sewage only at port reception facilities, however, this has not been a requirement.

Under the special area rules coming into effect, passenger vessels' sewage waste must be unloaded at port reception facilities or treated on-board with a special area-certified treatment plant before release into the sea.

#### When will it come into effect?

The special area regulations will be applied on or after 1 June 2021 for exist- ing IMO-registered passenger ships. For new passenger ships, the regulations come into effect on or after 1 June 2019. For direct passages between St. Petersburg and the North Sea, there is an extension until

HELCOM's main goal is to protect the marine environment of the Baltic Sea from all sources of pollution, and to restore and safeguard

Building on its experience and deriving from its key position in bridging science and policy making, HELCOM today leads and coordinates various processes for an improved marine en-

HELCOM members are all the nine Baltic coastal nations: Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland, Russia and Sweden, as well as the EU.

Read more at helcom.fi



days in 2014.



### Ships' Sewage in the Baltic Sea: New Special Area Regulations

### The Baltic was the first sea in the world to receive status as a special area for sewage and have this status enforced by the International Maritime Organization (IMO).

**SET TO COME INTO EFFECT** in June 2021, passenger ships, including cruise ships, will be limited to discharging sewage into port reception facilities or alternatively at sea only after treatment with very advanced on-board sewage treatment plants able to reduce nutrient input into the sea.

IMO declared the Baltic Sea a special area for sewage in 2011 based on a joint application by the Baltic Sea countries. The decision was taken to enforce the status in 2016, when IMO received notice from coastal countries that adequate port reception facilities were available. Coastal countries, as well as ports and passenger shipping interest organizations and NGOs, continue their collective efforts to further improve availability of adequate sewage port reception facilities across the Baltic Sea area.

#### Is ship sewage a problem?

Passenger traffic by sea is important to the whole Baltic Sea region but it should not be a burden to the vulnerable marine environment. Sewage created by these vessels contains nutrients, such as Phosphorus and Nitrogen, which aggravate algal blooms and other symptoms of eutrophication, one of the main environ- mental concerns in the Baltic Sea area.

Global rules on ship sewage have typically addressed sanitary concerns of sewage – but not nutrient content. At the same time, the Baltic coastal countries have applied increasingly stringent nutrient limits to sewage discharges from land.

While not the biggest source of nutrients in the Baltic Sea, ship sewage is not insignificant. With over 7.15 million person days spent on cruise ships in the Baltic Sea, and 40 million inter- national ferry passengers per year, proper sewage disposal is important to protect the health of the Baltic Sea. What will change?

Under the general IMO MARPOL Annex IV regulations, sewage can be discharged when 12 nautical miles from the nearest land.

Many environmentally conscious ships have voluntarily avoided this, discharging sewage only at port reception facilities, however, this has not been a requirement.

Under the special area rules coming into effect, passenger vessels' sewage waste must be unloaded at port reception facilities or treated on-board with a special area-certified treatment plant before release into the sea.

#### When will it come into effect?

The special area regulations will be applied on or after 1 June 2021 for existing IMO-registered passenger ships. For new passenger ships, the regulations come into effect on or after 1 June 2019. For direct passages between St. Petersburg and the North Sea, there is an extension until 1 June 2023.

#### About HELCOM

7 million international

cruise ship voyages

totalled 7.15 million

person days in 2014.

port calls are made in

either St. Petersburg,

Copenhagen, Tallinn,

Helsinki or Stockholm.

Two-thirds of cruise ship

HELCOM's main goal is to protect the marine environment of the Baltic Sea from all sources of pollution, and to restore and safeguard its ecological balance.

Building on its experience and deriving from its key position in bridging science and policy making, HELCOM today leads and coordinates various processes for an improved marine environment to benefit all.

HELCOM members are all the nine Baltic coastal nations: Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland, Russia and Sweden, as well as the EU.

Russia



Info sheet

### Ships' Sewage in the Baltic Sea: New Special Area Regulations

The Baltic was the first sea in the world to receive status as a special area for sewage and have this status enforced by the International Maritime Organization (IMO).



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Baltic Marine Environment Protection Commission

#### Shipping

**SET TO COME INTO EFFECT** in June 2021, passenger ships, including cruise ships, will be limited to discharging sewage into port reception facilities or alternatively at sea only after treatment with very advanced on-board sewage treatment plants able to reduce nutrient input into the sea.

IMO declared the Baltic Sea a special area for sewage in 2011 based on a joint application by the Baltic Sea countries. The decision was taken to enforce the status in 2016, when IMO received notice from coastal countries that adequate port reception facilities were available. Coastal countries, as well as ports and passenger shipping interest organizations and NGOs, continue their collective efforts to further improve availability of adequate sewage port reception facilities across the Baltic Sea area.

#### ▲ Is ship sewage a problem?

Passenger traffic by sea is important to the whole Baltic Sea region but it should not be a burden to the vulnerable marine environment. Sewage created by these vessels contains nutrients, such as Phosphorus and Nitrogen, which aggravate algal blooms and other symptoms of eutrophication, one of the main environmental concerns in the Baltic Sea area.

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#### About HELCOM

HELCOM (Baltic Marine Environment Protection Commission — Helsinki Commission) is the governing body of the Convention on the Protection of the Marine Environment of the Baltic Sea Area, known as the Helsinki Convention. The Contracting Parties are Denmark, Estonia, the European Union, Finland, Germany, Latvia, Lithuania, Poland, Russia and Sweden.

HELCOM was established about four decades ago to protect the marine environment of the Baltic Sea from all sources of pollution through intergovernmental cooperation.

HELCOM's vision for the future is a healthy Baltic Sea environment with diverse biological components functioning in balance, resulting in a good ecological status and supporting a wide range of sustainable economic and social activities.

helcom.fi

#### What?



No more dumping at sea: passenger ships will need to discharge untreated sewage at port, at dedicated facilities.



Only if sewage has been treated on board in certified plants can it be relased at sea when 12 NM from land.

#### When?



New ships will have to comply by June 2019, and existing ships by June 2012.

#### Why?



Ships' sewage contains nutrients which, if discharged into sea, causes eutrophication and algal bloom.

# Guidelines for monitoring of **Chlorophyll** *a*

How to provide spatiotemporal information for detection of short-term status and long-term trends

#### 1. Background

#### **1.1 Introduction**

Increase in phytoplankton biomass is a direct consequence of advancing eutrophication. For monitoring purposes, phytoplankton biomass is estimated by chlorophyll a (Chl a) concentration.

The amount of Chl a is not a direct proxy for phytoplankton biomass because of a highly variable ratio of cellular carbon to Chl a in phytoplankton (Geider 1987). Phytoplankton biomass, except for picoplankton, is more accurately assessed by quantitative taxonomical analysis. It is, however, laborious and thus provides with a smaller amount of data than the Chl a method, which lowers the status confidence of any taxonomy-based indicator. Regardless of its shortcomings, the Chl a method – being easy to sample and fast to analyze – is the method of choice for environmental studies.

The scope of this guideline is the determination of Chl a concentration; measured from water samples using wet analytics as well as estimated from in vivo Chl a fluorescence recordings.

#### 1.2 Purpose and aims

Monitoring of Chl a provides information that is used for assessing direct effects of eutrophication. The aim is to provide spatiotemporal information for detection of short-term status and long-term trends and to ensure that the data is compatible for the HELCOM core indicator 'Chlorophyll a'. The indicator description, including its monitoring requirements, is given in the <u>HELCOM core indicator web site</u>.<sup>1</sup>

#### 2. Monitoring methods

#### 2.1 Monitoring features

Chlorophyll a (Chl a) is an optically active pigment, and hence, its concentration within a sample can be determined optically by spectrophotometry (light abMonitoring of Chl a provides information that is used for assessing direct effects of eutrophication. sorption), fluorometry (fluorescence emission), and high-performance liquid chromatography (HPLC).

#### 2.2 Time and area

#### 2.2.1 Station-based determination of Chl-a

Station-based determination of Chl a using wet analytics should be carried out during the summer months (June–September), keeping in mind that the vernal peak in the northern parts of the Baltic Sea may be prolonged to June. Chl a concentration varies substantially both in space and time. For this reason, sampling is advised to cover the entire growth season. This leads to the possibility of assessing mean values for the spring / autumn season, and for the entire growth season.

Chl a monitoring is carried out by all HELCOM Contracting Parties, and the monitored area covers the entire Baltic Sea area, both the open sea and coastal areas.

#### 2.2.2. SOOP

Estonia, Finland and Sweden probe Chl a also in the Ship-of-opportunity (SOOP) approach. Chl a is estimated along the routine operating merchant routes using both wet analytics and in vivo Chl a fluorescence emission recorded by Ferryboxes.

#### 2.3 Monitoring procedure

#### 2.3.1 Monitoring strategy

The in vivo fluorescence yield, recorded at red Chl a fluorescence band, is considerably lower for cyanobacteria than for eykaryotic groups, and hence, the traditional in vivo Chl a fluorescence method (Lorenzen et al. 1966) does not reliably detect cyanobacterial biomasses (Seppälä et al. 2007).

To reach sufficiently high confidence criteria of the core indicator, the joint monitoring should produce annually at least 15 measurements in June–September for each assessment unit, i.e., for open sea sub-basins. The measurements should be as evenly



<sup>1</sup> http://helcom.fi/baltic-sea-trends/indicators/chlorophyll-a

#### Baltic Marine Environment Protection Commission

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Baltic Marine Environment Protection Commission

#### Heads of Delegation

Document title: Title of the document here Agenda item: Agenda item here

Code: XX-12-XX-34 Category: XX-12-XX-34

Submission date: 17.04.2018 Submitted by: Erika Sample

Reference: Your reference here



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**Baltic Marine Environment Protection Commission** 

HOD XX-2018

20 February 2018 Helsinki, Finland

Action requested: FYI

Code: XX-12-XX-34 Category: XX-12-XX-34



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Re: Letterheads and stationery

Dear Ms Erika Sample,

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Best regards, Dominik Littfass

#### Dear Ms Erika Sample,

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Best regards, Dominik Littfass

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**Baltic Marine Environment Protection Commission** 

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### HELCOM Copenhagen Ministerial Declaration

Taking further action to implement the Baltic Sea Action Plan – reaching Good Environmental Status for a healthy Baltic Sea

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3 October 2013, Copenhagen, Denmark