



GUIDANCE FOR THE BALTIC SEA MPA PORTAL USER INTERFACE

Published by:

Helsinki Commission – HELCOM
Katajanokanlaituri 6 B
00160 Helsinki, Finland

www.helcom.fi

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This document is a publication under Work Package 9 of the PROTECT BALTIC project.

For bibliographic purposes this document should be cited as:

"Protect Baltic D9.5 Guidance for the Baltic Sea MPA Portal User Interface – HELCOM (2025)"

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D 9.5 - Guidance for the Baltic Sea MPA Portal User Interface

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1. Introduction

The Baltic Sea Marine Protected Areas (MPA) Portal is a digital platform being developed as part of Work Package 8 (WP 8: MPA Portal) under PROTECT BALTIC.

In alignment with the principles outlined in Work Package 10 (WP 10: Sustainability and Exploitation of Project Results), and specifically Deliverable 10.1 (D 10.1: Developing a Sustainability Strategy), the portal should be designed to ensure long-term usability, accessibility, and relevance for end-users beyond the conclusion of PROTECT BALTIC in August 2028.

To ensure the long-term maintenance, updating and open access to information after the end of the PROTECT BALTIC project, the Baltic Sea MPA Portal will transition into HELCOM ownership once PROTECT BALTIC concludes. Therefore, the guidance for the MPA Portal User Interface (UI) prioritizes usability, ensuring that HELCOM partners can effectively access, navigate, and utilize the platform's features. The design must facilitate smooth interaction and efficiency for users engaged in marine protection efforts across the Baltic Sea.

The Baltic Sea MPA Portal is intended to:

1. Provide intuitive and seamless access to MPA-related information, including but not limited to management information, information on ecology and ecosystems, information on human activities and resulting pressures on the environment, as well as relevant documentation, guidelines etc.
2. Integration of various tools developed to support informed decision making in relation to planning and implementation of marine protection.
3. Facilitate tracking progress towards protection-related targets and goals for the region.
4. Facilitate collaboration among stakeholders through an accessible and well-structured interface.
5. Enhance user engagement and awareness of marine protection initiatives in the Baltic Sea through clear, organised, and visually effective presentation of data.

This guidance document outlines recommendations for designing a user-friendly, functional, and visually cohesive user interface (UI) that reflects PROTECT BALTIC's visual identity. It also emphasizes long-term usability, ensuring that the portal remains an accessible, reliable, and efficient tool for end-users. By focusing on practical design elements and usability principles, the guidance offers practical recommendations to ensure that the MPA Portal will support continuous and effective use under HELCOM's stewardship.

While this document offers practical and well-informed recommendations for the development of the Baltic Sea MPA Portal, it is intended as a guiding framework rather than a prescriptive or mandatory set of requirements. The goal is to provide a flexible reference to inform design choices, leaving room for adaptation by the development team as necessary to meet project needs and end-user expectations.

The design principles presented herein prioritize accessibility, ecological focus, and stakeholder engagement. The recommendations aim to create a visually unified and intuitive user experience. In line with this, the recommendations draw on the principles outlined in both Deliverable 9.2 (Visual Identity Guide: <https://protectbaltic.eu/visual-identity>), and HELCOM's visual identity guide (<https://helcom.fi/wp-content/uploads/2021/12/HELCOM-visual-identity.pdf>).

2. Core principles for the MPA Portal's UI design

The user interface (UI) of the Baltic Sea MPA Portal must be visually compelling and highly functional, ensuring an optimal user experience. Given its alignment with the ecological goals of the PROTECT BALTIC project and the broader vision of HELCOM, the UI design should reflect a balance between usability, sustainability, and adaptability.

To achieve this, the UI must adhere to some core principles:

Consistency across platforms: ensure a seamless, consistent design that aligns with PROTECT BALTIC's and HELCOM's branding, maintaining uniform typography, colour palette, and icons while smoothly transitioning ownership.

Flexibility for future adaptations: design a modular UI that supports seamless updates, new features, and integrations, ensuring adaptability to HELCOM's evolving needs without requiring a full redesign.

Accessibility and user-centric design: develop a clear, user-friendly interface with intuitive navigation, readable design, and web-compliant accessibility, enhancing usability with interactive elements while maintaining inclusivity.

Sustainability and ecological representation: implement a sustainable, marine-themed UI with eco-conscious aesthetics, optimized performance, and engaging visuals that effectively communicate ecological data.

By adhering to these core principles, the Baltic Sea MPA Portal will not only fulfill its immediate objectives within the PROTECT BALTIC framework but also ensure a seamless transition into long-term stewardship under HELCOM. This approach guarantees a robust, adaptable, and visually engaging platform that serves as a valuable tool for marine conservation efforts in the Baltic region.

2.1 Consistency

A cohesive and consistent design is essential for reinforcing brand identity and building trust among users. Ensuring that the UI aligns with an established look and feel will not only enhance user familiarity but also strengthen brand recognition and support the broader adoption of the Baltic Sea MPA Portal within HELCOM's ecosystem.

The placement of logos, colour schemes, and typography should be carefully considered to create a seamless and intuitive experience.

Logos should be positioned in the top-left corner of every page as this is the most natural and recognisable location for branding. Maintaining this placement across all pages will provide users with a sense of continuity as they navigate the Portal.

Colour choices also play a vital role in reinforcing the project's identity. The official PROTECT BALTIC gradients stem from HELCOM's visual identity guide and these should be applied to key thematic elements such as banners, buttons, and section dividers (see figure 1).

2.1.1 Colour palette

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 (see Figure 1)

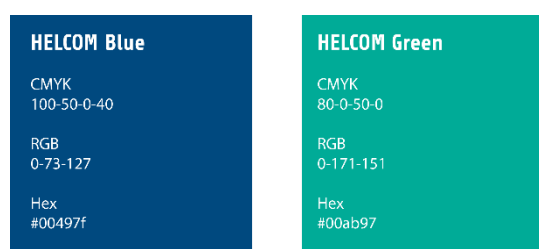


Figure 1: HELCOM primary colours and saturations

The main secondary colours are derived from HELCOM's primary colours. These are also the primary colours used under PROTECT BALTIC (see Figure 2).



Figure 2: HELCOM secondary blue and green colours and PROTECT BALTIC colour palette

2.1.2 Typography

Fonts should be used consistently to enhance readability and maintain a uniform

appearance throughout the Portal. In line with HELCOM's guidance on typography, **Share** should be used for title fonts (see Figure 3), and **Source Sans Pro** for body fonts (see Figure 4).

Titles:
Share

H1 – 84pt

H2 – 52pt

H3 – 32pt

H4 – 20pt

H5 – 12pt

H6 – 10pt

H7 – 9pt

Ipsusapidit

Ipsusapidit

Ipsusapidit

Ipsusapidit

Ipsusapidit

Ipsusapidit

Ipsusapidit (with rules above and below)

Figure 3: Share font for use in titles, headings and subheadings.

The **Share** font family should be applied across all headings, subheadings, and body text, ensuring clarity and alignment with the project's branding. Share offers a modern yet professional and technical aesthetic, which is well-suited for both print and online spaces. It has a relatively narrow character width which makes it perfect for titles, especially at larger font sizes, as it optimises space without sacrificing readability.

Body (sans):
Source Sans Pro

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

nonsedis ditectis volorru
adia. Rum quibusanda
em re ium, od maximi, con
anihil molo milis vellorat ut
ntiossitis necus aliciducid
oles erepellenda sanist ulli
spit quid que modit is eo
eliquam, nobite nus ducia
vitae nobitiam sundit ren

:	:	:	:	:	:	:	:	:	:
A	A	A	B	B	B	C	C	C	D
D	D	E	E	E	F	F	F	G	G
G	H	H	H	I	I	I	J	J	J
K	K	K	L	L	L	M	M	M	N
N	N	O	O	O	P	P	P	Q	Q
Q	R	R	R	S	S	S	T	T	T
U	U	U	V	V	V	W	W	W	X
X	X	Y	Y	Y	Z	Z	Z	[[
\]]	^	_	`	a	a	b	c

Figure 4: Source Sans Pro for use in body text

Source Sans Pro is an ideal font for the MPA Portal body text due to its high legibility, even at smaller sizes, ensuring users can easily read and navigate content on screen. Its versatility,

with six weights and regular and italic styles, allows for clear differentiation of text elements, enhancing organisation and readability.

2.1.3 Iconography

Iconography plays an important role in ensuring a cohesive and intuitive user experience. Icons should be designed with consistency in mind, aligning with the overall aesthetic of the platform while ensuring they are easily recognisable and functional.

To maintain visual harmony across the platform, icons should adhere to a consistent design style, whether:

- **Flat:** simple, minimalistic, two-dimensional with solid colours and no shadows or gradients;
- **Line:** thin, outline-only designs, often with no fill, offering a sleek, minimal appearance; or
- **Filled:** solid shapes with filled colours, providing a heavier, more prominent visual presence.

The design should be simple, clear, and instantly understandable, even at smaller sizes, ensuring they are effective for quick interaction and navigation.

The size and spacing of icons should be carefully considered to maintain uniformity and clarity. Standardised icon dimensions should be used across the portal, such as 24px for smaller icons and 48px for larger ones. Adequate spacing around icons is also essential to prevent clutter and allow for intuitive interaction.

To align with HELCOM's visual identity, icons should reflect the portal's primary and secondary colour palette (see Section 2.1.1). These colours should be applied consistently across all icons, with adjustments made for icon states (e.g. normal, hover, active) to provide clear visual feedback to users.

Wherever necessary, icons should be accompanied by text labels or tooltips to improve clarity and accessibility. This ensures that users, particularly those with varying levels of digital literacy, can navigate the portal with confidence.

For accessibility, icons should be distinguishable for all users, including those with visual impairments, and should meet contrast ratio guidelines for sufficient visibility. Additionally, text alternatives or ARIA labels should also be provided to enhance screen reader compatibility.

2.2 Flexibility

For the Baltic Sea MPA Portal to remain effective and adaptable, it is important that the UI be designed with modularity in mind. This modular approach will allow for incremental updates and improvements over time without disrupting the platform's core functionality.

By structuring the UI in a flexible way, HELCOM can ensure that the system remains stable and operational even if new features are added or existing ones are updated.

As HELCOM's and other end-user needs evolve, the platform should be able to accommodate the introduction of new features, tools, and datasets without requiring a complete redesign. This flexibility will support the ongoing growth and development of spatial protection efforts in the region and of HELCOM's work, allowing it to continuously meet the changing requirements of users and stakeholders. By ensuring that new functionalities can be added in a seamless manner, the Baltic Sea MPA Portal can continue to serve its intended purpose effectively – even beyond the timeline of the PROTECT BALTIC project.

Additionally, the Baltic Sea MPA Portal should be structured to support the integration of external data sources, mapping tools, and policy frameworks both within and external to HELCOM. As HELCOM collaborates with other organisations or potentially incorporates new technologies or frameworks into its work, the ability to easily integrate these resources will be crucial for the MPA Portal's long-term sustainability.

A flexible architecture will allow for smooth integration, ensuring that the system can scale alongside the evolving needs of spatial protection efforts without losing its cohesion or performance.

By prioritising flexibility, the Baltic Sea MPA Portal will remain adaptable, scalable, and ready to meet current and future requirements.

2.3 Accessibility and user-centric design

Ensuring accessibility is essential for creating an inclusive platform that serves a wide range of users, including individuals with disabilities. To promote equal access for all users, the Baltic Sea MPA Portal should adhere to established accessibility standards and be designed with the diverse needs of the target audience in mind.

Where feasible within the capabilities of the tools and back-end systems in use, the portal should aim to meet Web Content Accessibility Guidelines (WCAG) 2.1 AA standards¹. This includes ensuring proper contrast ratios between text and background, facilitating keyboard navigability, and ensuring compatibility with screen readers. Early discussions will be necessary to assess the feasibility of implementing specific accessibility features, particularly those requiring support from back-end systems or Esri tools. These measures will help maximize accessibility while considering technical constraints, ensuring that as many users as possible can effectively engage with the platform.

2.3.1 Multilingual support

While the Baltic Sea MPA Portal will be available exclusively in English, for the purposes of sustainability, it could be an important step to consider the linguistic diversity of the Baltic region in the design.

¹ [Web Content Accessibility Guidelines \(WCAG\) 2.1](#)

Future considerations may include language-specific adaptations, but for now, the focus should be on providing content that is clear and accessible to users with varying levels of English proficiency.

To ensure an intuitive and user-friendly experience, the interface should be designed with clarity at the forefront. Clear and concise language, with intuitive navigation, will enhance user understanding and engagement. Readability should be a key consideration, with appropriate font sizes, colour contrasts, and well-structured content layouts that accommodate a wide audience (see Section 2.1).

By using a consistent and legible design, the portal can enhance usability and reduce cognitive load, making it easier for all users to navigate and interact with the platform.

2.3.2 Scalability and responsiveness

The platform should be designed with scalability in mind, ensuring a seamless and highly functional UI experience primarily on desktop devices, as this aligns with the current user needs. While implementing a fully responsive design that optimises the platform across various screen sizes would be an ideal feature for many applications, it may not be achievable here due to the specific nature of the data and map interaction that the MPA Portal aims to provide. When asked, users have not expressed a demand for mobile versions, so the primary focus will be on optimising the desktop experience to handle the complexities of data presentation and map navigation effectively.

2.3.3 Interactive elements

Interactive elements such as filters, search functions, and dynamic visuals should be designed to enhance and target the user experience without overwhelming users. These features should be intuitive, providing users with the ability to find relevant information quickly and efficiently, while also maintaining a clean and organised layout.

By prioritising accessibility and user-centric design, the Baltic Sea MPA Portal will ensure an inclusive, clear, and effective experience for end users including stakeholders, policymakers, researchers, and the general public.

2.4 Sustainability and ecological representation

The Baltic Sea MPA Portal should embody PROTECT BALTIC and HELCOM's ecological mission through design elements that reflect the importance of marine protection.

By incorporating visual aspects that align with environmental values, the platform can reinforce its commitment to ocean sustainability. The design should integrate elements that highlight the project's ecological goals, such as using the colour palette, imagery, symbols, and iconography that evoke marine life and protection efforts (see Section 2.1). These design choices will serve as a constant reminder of the platform's purpose and commitment to preserving the marine environment.

2.4.1 Lightweight design and optimised performance

To ensure that the Baltic Sea MPA Portal aligns with sustainability principles, the design should prioritise lightweight elements and optimised performance. This will help to minimise the environmental footprint of the platform by reducing server load, energy consumption, and resource usage.

Efficient design choices should contribute to the long-term sustainability of the MPA Portal while maintaining a smooth user experience.

2.4.2 Effective use of infographics and data visualisations

Infographics and data visualisations should be leveraged to present complex ecological, management and human activity data in an accessible and engaging manner. These visual tools will allow users to understand and interact with scientific data more easily, making it both informative and visually appealing. The use of clear, well-designed infographics will also ensure that users can quickly grasp key insights, furthering the MPA Portal's goal of promoting environmental awareness and action.

By focusing on sustainability in both design and performance, the Baltic Sea MPA Portal will not only reflect the project's ecological mission but also contribute to the broader goal of promoting marine protection in a way that is efficient, impactful, and engaging for users.

3. User Interface components

The User Interface (UI) components of the Baltic Sea MPA Portal should be designed with clarity, ease of use, and efficiency in mind. Each element, from navigation to interactive maps, plays a critical role in guiding users through the Portal, providing them with relevant information and tools to support their needs.

One possible approach for the Baltic Sea MPA Portal's interface could be to adopt a **one-page format**, where users could access all core content by simply scrolling down the page. In this design, each section would seamlessly flow into the next, and the **main menu** could include anchor links to quickly navigate between sections. This design could create an intuitive and engaging user experience, with all information easily accessible without leaving the page. However, the feasibility and effectiveness of this approach should be further evaluated in the work of work package 8 (WP8: MPA Portal) based on user needs, technical considerations and testing.

3.1 Navigation

Effective navigation is essential to usability and user satisfaction. The navigation system for a one-page portal could be designed to keep the user experience straightforward and fluid.

Main menu: A horizontal menu bar could be implemented to feature the core sections of the portal, with anchor links to scroll to specific areas of the page. Key sections could include:

- **Home:** The starting point of the portal, offering a brief introduction and key highlights.
- **Explore MPAs:** Directly links to the section with interactive maps, MPA data, and links to information on MPAs such as the MPA Highlights.
- **Data and reports:** Links to downloadable datasets, reports, and research.
- **About HELCOM/PROTECT BALTIC:** Provides background on the rationale for the Portal, HELCOM's mission and the work of the PROTECT BALTIC project.
- **Contact us:** A section for users to get in touch, including contact forms and potentially FAQs.

Pop-up menus: The About and the Contact us sections could appear as pop-up menus to further information so that the main page can focus solely on the maps and the information from the databases, reports and progress trackers

Dropdown menus: To prevent clutter, nested categories could be organised under dropdown menus that appear when users hover over main menu items. These dropdowns could be used sparingly to guide users to more specific sections or information.

Search functionality: A robust search bar with auto-suggestions and filters could be implemented to enhance content discovery within the portal, making it easier for users to locate specific reports, MPAs, or data points.

3.2 Homepage

The homepage serves as the entry point to the portal and should offer a balance between informative content and visual appeal. As part of the one-page design, the homepage could integrate the following features:

Hero banner: the top of the page could feature a high-resolution image of the Baltic Sea, accompanied by a concise tagline summarising the MPA Portal's purpose. This banner could also include a call-to-action button, prompting users to explore more. Alternatively, it could already show the main map. Regardless, the first thing users should see should be visual (see Section 3.3).

Quick links: below the hero banner/map, a series of buttons or links could be presented, providing direct access to frequently accessed sections such as the interactive maps or policy documents. These links could use anchor links to smoothly scroll to the relevant sections further down the page.

Updates section: An area for displaying recent news, updates, and upcoming events related to MPAs. This section could dynamically update with new content as needed, keeping the homepage fresh and relevant.

3.3 Interactive maps

Interactive maps are a key feature of the Baltic Sea MPA Portal, offering users spatial insights and the ability to engage with the ecological, management and human activity data in a

dynamic and interactive manner. Within the one-page layout, the interactive map could be strategically placed (instead of the hero banner) as users continue scrolling to view the data in a more detailed context.

Map layers: Users should be able to toggle various layers on the map that display different types of ecological data, such as protection levels, biodiversity hotspots, management related data and human activity impacts. This could allow users to explore and visualise the data in a way that is relevant to their interests.

Intuitive controls: The map interface could include basic controls, such as zoom, pan, and search functionalities, ensuring users can easily navigate and interact with the maps. These controls should be simple, intuitive, and easy to access.

Legend and filters: A clear and comprehensive map legend could be included to explain the meaning of the different layers and data points. Additionally, filtering options could be available, allowing users to customise the data they view based on specific criteria (e.g. region, protection status, human impact, measures).

3.4 Footer

The footer serves as an important navigational and informational element, providing essential links and transparency at the bottom of the page. Even in a one-page layout, the footer helps to reinforce usability and provides critical information without overwhelming the main content.

Essential links: The footer should include links to important resources such as legal disclaimers, funding acknowledgments, and partner logos. These links would provide users with the information they need to understand the project's context and affiliations.

Compliance with EU funding acknowledgment requirements is mandatory. The EU emblem has to be placed prominently in the Portal alongside the project logo where applicable, including in the header.

The following acknowledgment text also must be included:

"Funded by the European Union. Views and opinions expressed are those of the authors only and do not necessarily reflect those of the European Union or the European Climate, Infrastructure and Environment Executive Agency."

Contact information: A contact section could provide users with a form or an email address for enquiries. This would allow users to easily reach out for further information or support.

4. Wireframe image

Alongside this guidance document, a wireframe image has been developed to visually illustrate the possible layout and structure of key UI components into a one-page layout. The wireframe has been developed both as a low and a high-resolution frame.

The wireframe reflects the one-page format of the portal, demonstrating how content could progressively unfold as the user scrolls down. It shows how navigation and content could be organised, ensuring a clear and seamless user experience.

This wireframe serves only as a reference for the design process, helping to ensure that all components are placed in a logical, intuitive order for the development team to progress with the MPA Portal further (see Figures 5 and 6).

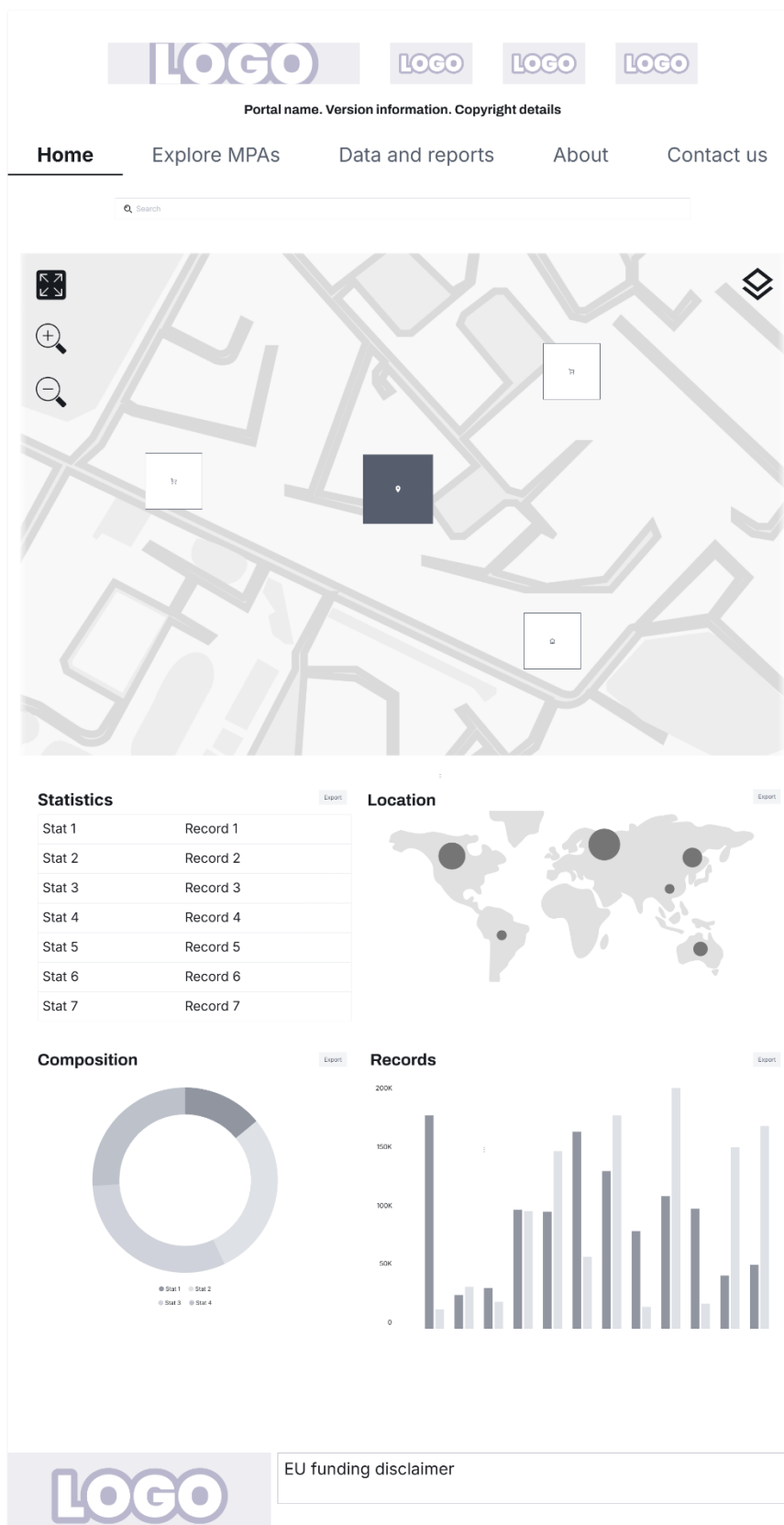


Figure 5: Low-fi mock-up of a one-page MPA Portal design

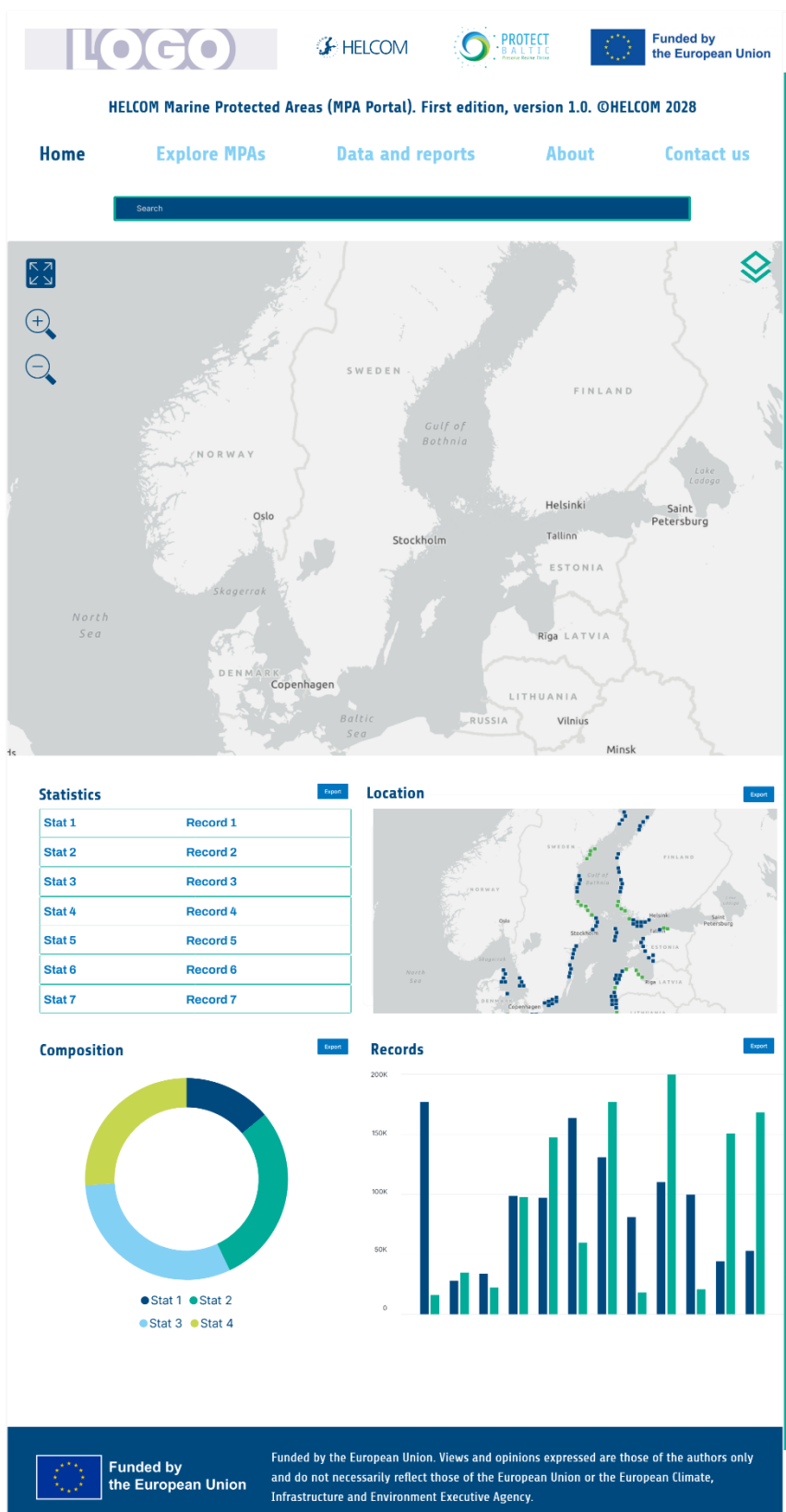


Figure 6: High-fi mock-up of a one-page MPA Portal design

5. Stakeholder engagement in UI development

To ensure that the Baltic Sea MPA Portal's user interface aligns with the needs of its users and stakeholders, a reference group has been established to help guide its development. This group will provide insights and feedback throughout the process, contributing to a user-friendly and effective design.

Additionally, WG BioDiv, EG MPA, and potentially the MPA Managers Network will be invited to review and comment on the UI at key stages of development. Their input will help refine the portal's usability and functionality, fostering a co-creation approach that ensures the final product meets the expectations of its diverse user base.

This collaborative process will enhance the relevance and accessibility of the MPA Portal, ensuring it effectively supports the management and conservation of MPAs in the Baltic Sea.

6. Conclusion

The Baltic Sea MPA Portal plays a crucial role in advancing the mission of PROTECT BALTIC and facilitating the protection of the Baltic Sea's marine ecosystems.

These guidelines serve as recommendations for how the portal could successfully align with the project's and HELCOM's visual identity, ensuring a cohesive and consistent experience for all users.

A thoughtful and user-centric design will enhance accessibility, foster better stakeholder collaboration, and engage the public in marine protection efforts. Through these recommendations, the Baltic Sea MPA Portal could provide an inclusive, intuitive, and informative platform that supports the ongoing work of HELCOM and its partners, helping drive more effective actions to protect the Baltic's marine environment.



The PROTECT BALTIC project is funded by the European Union under Grant agreement ID 101112866. This publication was funded by the European Union. Its contents are the sole responsibility of the author(s) and do not necessarily reflect the views of the European Union.



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