

# The HEALTHY SAILING project

#### The consortium

The HEALTHY SAILING project represents a consortium of 24 members from 10 universities, 2 governmental public health institutes, 5 research or training institutes, one scientific NGO, 5 shipping companies and one engineering company.

### General objective

The project's general objective is to improve the quality of passenger shipping services brought to society, facilitating recovery from the COVID-19 pandemic and making the passenger shipping sector safer, more resilient, competitive and efficient. This will be achieved by producing evidence for infection control, validated prevention, mitigation and management (PMM) measures and training, intended for use in policymaking and ship operations, and whose implementation will reduce public health incidents on-board large passenger ships.

### Approach

HEALTHY SAILING provides a comprehensive approach introducing innovative, multilayered, risk and evidence-based, cost-effective tested prevention, mitigation and management measures for infectious disease, differentiated for large ferries, cruise ships and expedition vessels.

#### HEALTHY SAILING OUTPUTS

Preparedness and response to infectious diseases Known to frequently occur onboard Never occured onboard Unknown aetiology

Entire travel journey of passengers & crew Home to ship and On-board Shore-side visits

Operations from ship to Ship-board operations Shore-side operations Port destinations &

Global perspective Project outputs towards communities and passenger shipping industry

Through the activities of seven Work Packages, the project will:

- Establish a comprehensive scientific evidence-base concerning mechanisms that facilitate the on-board spread of infection and effectiveness of different mitigation
- Produce evidence-informed guidelines
- Develop, test and validate measures for healthy environments and early health threat detection on-board
- Address port operations and community needs
- Further knowledge, awareness and compliance

Read more about the consortium here and about the impact and vision here Check the factsheet published in EC CORDIS here

This is a biannual publication of the HEALTHY SAILING project. Next issue: August 2023

#### Inside this issue:

The Healthy Sailing project

Project status updates

2

HS in the media

Events

**Publications** 

#### HORIZON EUROPE

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Issue 1—February 2023

# **Project Status Update**

The project is currently in the **initiation phase of evidence accumulation**. During this phase data collection & assessment of infection disease per type of ship/port facility is being conducted.

#### **Deliverables & Milestones**

The below deliverables and milestone have been completed and submitted during the first 6 months of the project:

- D1.1: Project quality assurance & management plan
- D.2.1 Data management plan
- D.2.2 Interim dissemination & exploitation plan
- D.3.1 Foundation report for COVID-19 related preliminary results
- D.6.2 Terms of reference International expert panel
- D7.4: Study initiation package for ethics requirements related to the clinical study under D7.1
- M1: Project procedures and expert groups established

# Work Package 1- Technical and scientific coordination

A total of 9 multi-discplinary expert groups have been established and **25 work initialisation meetings** have been held. Work has initialized in **28 out of the 34 task plans**.

In addition to the expert groups developed, the University of Thessaly (UTH), Greece (project coordinator) established the HEALTHY SAILING Advisory Board (Task 1.4) and a Research Ethics Committee (Task 1.3).

UTH further organised **two consortium level meetings** (Introductory meeting in June 2022 and Kick -off meeting in September 2023) where specific task related and administrative-related issues were discussed.

Involvement of the key stakeholders has been highlighted since the proposal stage and keeping a focus towards this direction the consortium held five meetings with the industry and port associations.

The Consortium Agreement was singed by all consortium beneficiaries and the Project and Quality Assurance and Management Plan (D.1.1).

# Work Package 2—Exploitation, Dissemination and Communication

The visual identity of the project was designed by the SHIPSAN association and relevant materials were developed (logo, template ppts etc). A roll-up banner to be used by the consortium in various events and a brochure presenting the key outputs of the project were developed by SHIPSAN Association.

The University of Thessaly, Greece established the Scientific Publication Team and developed the first version of the Data Management Plan (Task 2.1) and the Interim Dissemination and Exploitation Plan (Task 2.2). The <a href="HEALTHY SAILING website">HEALTHY SAILING website</a> was launched consisting of both a **public and a member's area**, which will provide both a dissemination and communication tool.



**Social media accounts** were set up by SHIPSAN association and connections were established. See table below presenting relevant statistics.

Consortium partners have **participated in various events and developed articles in various media** promoting and increasing the awareness level of the project. You can read more about this in the following pages.

Social Media platform	Stats
LinkedIn	Connections: 500+ / Followers: 849 Posts: 7 / Average impressions per post: 760
<u>Twitter</u>	Followers: 85 / Posts: 5
<u>Facebook</u>	Followers:15 / Posts: 5 / Likes: 10
YouTube	n/a
ResearchGate	n/a

## Healthy sailing in the media

- Linkedin press release. Read more here
- Project press release at the public homepage of University of South-Eastern Norway Read more here
- Article about the project in the journal "Khrono".
   Khrono is a Norwegian online newspaper for higher education and research. Read more <a href="here">here</a>
- Project Healthy Sailing promoted in Croatian newspapers "Novi list". Read more <u>here</u>



# **Project Status Update**

# Underlying evidence for mechanisms facilitating spread of infection and mitigation measures (Task 3.2.1)

Under Task 3.2.1 a scoping search and systematic review is to be conducted by the University of Thessaly, Greece. The scoping search aims to provide an inventory of published documents addressing issues related to mechanisms that facilitate infection spread on board large passenger ships and to better understand the effectiveness of prevention, mitigation and management measures implemented. The scoping search has been completed and the methodology for the systematic review has been defined. Results from the scoping search are presented below:

Scoping search Topic A: What is the published scientific literature, regulations, guidelines and policies in regards to infectious disease prevention, mitigation and management (PMM) in large passenger ships and at ports?

The scoping search identified:

- 353 scientific articles,
- 179 technical guidance documents (international/regional/national authorities),
- 13 legislative/regulatory documents (international/regional/national authorities),
- 21 industry-based guidelines (international/regional industry associations),
- 22 reports (international/regional/national organizations) and
- 32 other records (websites, press releases, statements etc.).

In total, 620 identified documents of the scoping search were categorized into a searchable database, available in the members' area of the HEALTHY SAILING web portal.

Scoping search Topic B: What is the published scientific literature, regulations, guidelines and policies in regards to medical operations in expedition vessels?

The scoping search identified:

- 22 scientific articles,
- 4 technical guidance documents (regional/national authorities),
- 5 legislative/regulatory documents (international authorities),
- 5 industry-based guidelines (international/regional industry associations), and
- 5 exercise reports (regional level).

In total, 41 identified documents of the scoping search were categorized into a searchable database, available in the members' area of the HEALTHY SAILING web portal.

# Technology induced behavioural change in hand hygiene management (Task 7.1.)

During task 7.1 an intervention study will be carried out, aiming to find effective ways to decrease the chance of infection transmission. The study will measure the effect of different infection-control measurements; surface disinfection, hand hygiene monitoring, and training. Effect of the infection control measurements will be monitored by different outputs, including microbiological methods. To set up the right experimental parameters, USN will carry out some in-house tests in Norway, at their own campus.

The chance of infection transmission is high when many people use common areas, especially if these areas are small and poorly ventilated, and surfaces are frequently touched. Elevators fulfill all these requirements, therefore our first trial is focused on elevators. The effectiveness of elevator disinfection techniques will be examined during the 2023 spring semester.

Two of the elevators at Drammen Campus was equipped with far-UVC lamps, while the third elevator remained unchanged. Far-UVC effectively reduces the number of germs, while being safe for people. The experiment was reported to the Norwegian Regional Ethical Committee (No. 576150). Microbiological samples from different surfaces of elevators will be collected regularly in the coming months and will be analyzed by different methods.







Issue 1—February 2023



# **EVENTS**

# HEALTHY SAILING Past Events

### **HEALTHY SAILING Kick-off meeting**

### 14-15 September 2022 | Athens, Greece

The kick-off meeting provided the first opportunity for the HEALTHY SAILING consortium to meet in person and discuss the project's objectives, methodology and initiate planning of the technical and scientific work required both within and between work packages and expert groups. The Kick-off meeting additionally provided the opportunity to meet the Aspect 2 (HS4U) consortium, learn about their project and discuss areas for possible synergies between projects, mechanisms for follow-up and future actions required between the two project consortia.



# HEALTHY SAILING Steering Committee meeting

### 12 January 2023 | Online

Healthy Sailing Work Package leaders came together on 12<sup>th</sup> January 2023 to discuss the project progress and decided amongst other issues:

- The project is progressing well, with initiation and development activities are on track.
- The next General Assembly meeting will be organised in September 2023 following one year of project implementation.
- The 1<sup>st</sup> Advisory Board Meeting will be organized in May 2023.

# HEALTHY SAILING Upcoming Events

1<sup>st</sup> Advisory Board Meeting May 2023
2nd General Assembly meeting
September 2023

# **Other Upcoming Events**

17th World Congress on Public Health

May 2-6 2023| Italy

Read more here

### International Conference SeaConf 2023 9th Edition

### May 18-19 2023| Romania

During 18<sup>th</sup>-19<sup>th</sup> of May 2023, the Romanian Naval Academy will organize the **International Conference SeaConf 2023 9<sup>th</sup> Edition** (see <a href="here">here</a>). The project will be posted with roll-up and also, the team members will attend the workshop with a poster/presentation about the Healthy Sailing project scope, objectives and results. Paperworks from the project team members will be very welcome to be published in the Conference Proceedings or in the Scientific Bulletin of Naval Academy (See <a href="here">here</a>).

# MEDCRUISE 62nd General Assembly

23-26 May, 2023 | Corfu, Greece

Read more here



### 16th European Public Health Conference

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8-11 November 2023 | Dublin, Ireland

Read more here







# **EVENTS**

# Other past events

# International Public Health Congress on Maritime Transport and Ports 2022: sailing to the post-COVID-19 era

#### 21-22 October | Athens, Greece (hybrid)

The HEALTHY SAILING project was presented at the <u>Public Health Congress on Maritime Transport and Ports 2022: sailing to the post-COVID-19 era organised by the European Scientific Association for Health and Hygiene in Maritime Transport (EU SHIPSAN ASSOCIATION) in collaboration with Cruise Lines International Association (CLIA) and the Association of Mediterranean Cruise Ports (MedCruise).</u>

HEALTHY SAILING partners participated as members of the Scientific and Organising Committees, organised round-tables and delivered presentations in relevant subjects. The HEALTHY SAILING project was also presented during the opening ceremony. The Congress brought together about 400 expert scientists, government officials, maritime industry representatives, port administrators and other organisations. More than 80 expert speakers and chairs from national, European and international organisations (WHO, European Commission DG MOVE, EMSA, US CDC, CLIA, MedCruise, ECSA) discussed the latest, evidence-based, scientific data in the field of public health in maritime transport.

The aim of the event was to present best practices and current research and innovation activities and results in the field of public health in maritime transport. Issues related to evidence-based prevention and response strategies for global health diseases such as COVID-19, Monkeypox, influenza, Norovirus gastroenteritis, as well as environmental health and hygiene, crew health, cross-border health threats related to the maritime transport sector were discussed. Cruise line protocols represented some of the strongest actions taken by any industry to address and mitigate COVID-19. Ports in the Med also have worked intensively to create the conditions for safe cruise ships and passengers and crew visits. The responsible return of cruise tourism has been underpinned by collaboration with governments and public health experts, and the industry's efforts were proven effective.

During the Congress, scientific evidence were presented about effective measures to safely restart cruise ship operations, as well as research results demonstrating that cruise ships implementing certain protocols have been a safe holiday setting during the pandemic when comparing the risk of COVID-19 transmission in the community and land-based holiday premises. As we move into the post-COVID-19 era, it is important to use the knowledge gained to improve preparedness and move to potential future public health risks in ports and ships. For more information visit the congress website here



NEXT International Public Health Congress on Maritime Transport and Ports 2024 | ITALY

# 57th Meeting of Implementation Group on EMILYO program

#### 5-7 December 2022 | Gdynia, Poland

The Healthy Sailing project scope, objectives and results had been disseminated during the 57th "Meeting of Implementation Group on EMILYO program" – the European Union Military Academic Institutions Network for Exchanges – organized by the Polish Naval Academy, Gdynia, Poland, 05th -07th of December 2022. The meeting was attended by 80 participants, representing 45 military universities from the European Union.

## Port Health Coffee Catch Up meeting, CIEH

#### 15 December 2022 | UK

The HEALTHY SAILING project was presented in the **Port Health Coffee Catch Up meeting** organised by the **Chartered Institute of Environmental Health, United Kingdom** on 15<sup>th</sup> of December 2022. The project's objectives and expected outcomes were presented to the UK port health group.

### Guildford's Car Free Day

#### 25 September 2022 | UK

The University of Surrey's GCARE team participated in Guildford's Car Free Day on Sunday, September 25. During the event, a short presentation was shown to the members of the local community at the Guildhall by Prof. Prashant Kumar, in which he presented the risk of infectious diseases transmissions on cruise ships and passenger ferries. In addition, GCARE researchers also set up the `clean air` booth to provide further information, such as HEALTHY SAILING project, research objectives and activities.





## **Publications**

# Congress proceedings - Public Health Congress on Maritime Transport and Ports 2022: Sailing to the Post-COVID-19 Era

Med. Sci. Forum, 2022, SHIPSAN 2022

Number of Papers: 31

Volume Editors: Despena Andrioti Bygvraa, Sebastian Crespi, Miguel Dávila Cornejo, Lieselotte De Marez, Christos Hadjichristodoulou, Volker Harth, Pavle Jelicic, Jørn Klein, Antonios Michaelakis, Varvara Mouchtouri, Nina Pirnat, Andrea Smith, Carmen Varela Martínez, Thijs Veenstra and Thomas Von Muenster

### Published papers available here

# **Design considerations for a generic database for dynamic maritime parameters**

Authors: Andrei Bautu, Anca Atodiresei, Cata Marian

To be published in the issue 1/2023, Scientific Bulletin of Naval Academy;

Abstract. The advancement of technology has made the maritime industry more complex, leading to an increase in the need for effective management systems. In this research paper, the authors are aiming to reveal an analysis of the design considerations for a generic database for collecting and processing a dynamic set of maritime parameters. The objective of the paperwork is to develop a database system that can handle a wide range of maritime parameters and that can be further used in different applications, including for Healthy Sailing results purposes. The paper covers aspects such as data collection, modelling, data storage, automation and software performant implementation. While the authors are focused in the beginning on meteorological parameters, the proposed database system is also designed to be flexible and efficient, allowing for easy integration with other systems in the maritime industry, including for the cruise line industry.

# Optimization of video recording pipeline for open-source conferencing software - a case study on BigBlueButton

Authors: Andrei Băutu, Anca Atodiresei, Elena Băutu

To be published in the issue 1/2023, Scientific Bulletin of Naval Academy;

Abstract. Due to the Covid-19 pandemic, most entities from the industry, finance, social, and education fields had moved their daily office meetings and classes to online video conferencing platforms, to avoid the spread of the virus, but still, they want to maintain the greatest degree of human interaction possible, which raised the demand for paid and free online video conferencing services. Due to the rising demand, the pressure on communication networks and data centers processing video streams, both live and recordings, has increased exponentially, to the point of causing service outages. To prevent such problems, officials made public appeals to companies and endusers to monitor and reduce their video streaming demands, tech companies are investing in extending their data center capabilities, and researchers and software companies are looking for ways to optimize the performance of existing systems concerning video processing and transmission. In this paper, the authors are seeking to analyse and to optimize the processing pipeline for video recordings of online meetings held via Bigbluebutton, a well-known open-source software for videoconferencing. The main goal of pursued research is to reduce the computational load of its processing pipeline, while maintaining content quality and, if possible, also reduce bandwidth requirements.



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