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STEERER

STRUCTURING TOWARDS ZERO EMISSION WATERBORNE TRANSPORT

Deliverable 4.3: Final Plan for the Exploitation of Action Results

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No.875285

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Table of contents

List of figures 4
List of Tables 5
Acronyms 6
1 Introduction 8
1.1 The STEERER Project 8
1.2 Purpose of the Final Exploitation Plan 10
2 Communication and dissemination tools 11
2.1 Visual Identity 12
2.2 Communication & Dissemination materials 15
2.3 Website & Social Media 26
2.4 Media Relations 35
2.5 Digital campaign towards wider society 41
2.6 STEERER Ambassadors 46
3 Communication & Dissemination Activities 49
3.1 Events, conferences & outreach 49
3.2 STEERER Mid-term and final conference 52
4 The STEERER Advice for the ZEWT Partnership 60
4.1 The STEERER Advice on the Partnership's SRIA 61
4.2 Policy, Regulatory, Business and other STEERER Advice 63
4.3 STEERER Monitoring Framework for the Partnership's SRIA 64
5 The Green Shipping Expert Group 66
6 Final evaluation of C&D and exploitation activities 70
7 Conclusions 73

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No.875285

Annex I 74
Citizen Lab Campaign – Shipping Industry Questions 74

List of figures

FIGURE 1. STEERER PARTNERS 8
FIGURE 2: WATERBORNE TP AND STEERER'S LOGOS 13
FIGURE 3: STEERER'S WORD TEMPLATE 14
FIGURE 4 STEERER'S POWERPOINT TEMPLATE 15
FIGURE 5 STEERER 1ST GENERAL LEAFLET 16
FIGURE 6 STEERER GENERAL LEAFLET WITH CALL FOR EXPERTS 16
FIGURE 7 STEERER 2ND LEAFLET A SIDE 17
FIGURE 8 STEERER 2ND FLYER B SIDE 18
FIGURE 9 STEERER ROLL-UPS: MARITIME (LEFT) AND INLAND (RIGHT) 19
FIGURE 10 STEERER PROJECT VIDEO SCENE 1 20
FIGURE 11 STEERER PROJECT VIDEO SCENE 2 20
FIGURE 12 STEERER PROJECT VIDEO SCENE 3 21
FIGURE 13 STEERER NEWSLETTER #7 NOVEMBER 2022 24
FIGURE 14 STEERER GENERAL PRESENTATION SLIDE 1 25
FIGURE 15 STEERER GENERAL PRESENTATION SLIDE 2 25
FIGURE 16 STEERER WEBSITE - ABOUT PAGE 26
FIGURE 17 STEERER WEBSITE - NEWS PAGE 27
FIGURE 18 STEERER WEBSITE - GSEG LIST 27
FIGURE 19 STEERER WEBSITE - RESULTS PAGE 28
FIGURE 20 STEERER WEBSITE - CONSORTIUM PAGE 28
FIGURE 21 STEERER WEBSITE PAGE VISITS (MAY 2020 - DECEMBER 2022) 29
FIGURE 22: SOCIAL MEDIA POST FOLLOWING THE REACTIVE APPROACH 31
FIGURE 23 STEERER TWITTER PAGE - NOVEMBER 2022 32
FIGURE 24 STEERER LINKEDIN PAGE - NOVEMBER 2022 33
FIGURE 25: STEERER'S PRESS RELEASE 1 35
FIGURE 26 STEERER ARTICLE IN OPEN ACCESS GOVERNMENT 39
FIGURE 27 STEERER ARTICLE IN SCHEEPVARKRANT 40
FIGURE 28 STEERER CITIZEN ENGAGEMENT PLATFORM HOMEPAGE ON CITIZENLAB 41
FIGURE 29 STEERER CITIZENLAB PLATFORM INTRODUCTION PAGE 42
FIGURE 30 STEERER SHIPPING QUIZ PROJECT PAGE ON CITIZENLAB 43
FIGURE 31 STEERER CITIZENLAB - MAPPING WATERBORNE FRONTRUNNERS 44
FIGURE 32 JUTTA PAULUS, GREENS/EFA EUROPEAN PARLIAMENT 47
FIGURE 33 SEBASTIAN VERHELST, LUND UNIVERSITY 48
FIGURE 34 STEERER AT 19TH EUROPEAN WEEK OF REGIONS AND CITIES BANNER 50
FIGURE 35 STEERER PARTNERS EICB AT THE MARITIME INDUSTRY FAIR 2022 51
FIGURE 36 STEERER AT WATERBORNE STAND AT TRA2022 52

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FIGURE 37 WATERBORNE TRANSPORT WORKSHOP BANNER 53
FIGURE 38 STEERER MID-TERM CONFERENCE WITH CINEA 54
FIGURE 39 STEERER MID-TERM CONFERENCE AT CINEA LOBBY 55
FIGURE 40 PRESS RELEASE: STEERER AND CINEA WORKSHOP 56
FIGURE 41 STEERER FINAL EVENT - WINNING CANVAS C-HIVE 58
FIGURE 42 STEERER FINAL EVENT - MORNING SESSION 59
FIGURE 43: STEERER COMMUNICATION AND DISSEMINATION TOOLS 70

List of Tables

TABLE 1 LIST OF STEERER NEWSLETTERS 23
TABLE 2: PROJECT RELATED PAGES 38
TABLE 3 STEERER CITIZENLAB PROJECTS STATISTICS 45
TABLE 4 GREEN SHIPPING EXPERT GROUP MEMBERS 67
TABLE 5: STEERER'S COMMUNICATION AND DISSEMINATION KEY PERFORMANCE INDICATORS AND RESULTS 72

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Acronyms

Acronym	Meaning
CSA	Coordination and Support Action
C&D	Communication and Dissemination
cPP ZEWT	Co-Programmed Partnership on Zero-Emission Waterborne Transport
DESCA	Development of a Simplified Consortium Agreement
DG	Directorate General
EC	European Commission
GHC	Greenhouse Gas
GSEG	Green Shipping Expert Group
HEU	Horizon Europe
KPI	Key Performance Indicator
IA	Innovation Action
IMO	International Maritime Organization
IPR	Intellectual Property Rights
RIA	Research and Innovation Action
SC	Scientific Committee
STEERER	Structuring towards zero emission waterborne transport
WP	Work Package
ToR	Terms of Reference

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Version	Date	Author	Summary of changes
1	02/12/2022	Andrea Hrzic, Magellan	First draft
2	09/12/2022	Andrea Hrzic, Magellan	Second draft. Restructured and revised chapters repeated from D4.1
3	15/12/2022	Manuela Flachi, Magellan, Silvia Gaggi Isinnova, Martin Quispel, EICB	Third draft. Adding inputs to GSEG and SRIA updates
4	21/12/2022	Manuela Flachi, Magellan	Integration comments peer-review

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1. Introduction

1.1 The STEERER Project

STEERER (Structuring Towards Zero Emission Waterborne Transport) coordinates the establishment and communication of a Strategic Research and Innovation Agenda[1] and an Implementation Plan **towards zero-emission waterborne transport, in cooperation with all key stakeholders needed to facilitate the transformation to clean waterborne transport**. In the definition of STEERER, as well as cutting greenhouse gas emissions, all harmful environmental emissions, water pollution and noise emissions have to be eliminated. STEERER's mission is to bring the various initiatives and sectors' stakeholders together to join forces for a combined effort with the maximum impact for the climate, people's health and Europe's economy.

STEERER is coordinated by SEA EUROPE, counting with the participation of a total of eight partners from six EU countries.

Figure 1. STEERER Partners

[1] The STEERER project will provide input to the Waterborne TP regarding the development and update of the Strategic Research and Innovation Agenda of the Candidate Co-Programmed Partnership on Zero-Emission Waterborne Transport in the framework of Horizon Europe (https://ec.europa.eu/info/sites/info/files/research_and_innovation/funding/documents/european_partnership_for_zero-emission_waterborne_transport.pdf).

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In sum, STEERER aims to:

- Jointly set emission targets towards 2050 (including targets for 2025 and 2030);
- Contributing to the update of the Strategic Research and Innovation Agenda (SRIA) of the Co-Programmed Partnership on Zero-Emission Waterborne Transport (cPP ZEWT)[2] in the framework of Horizon Europe (HEU), to be able to reach these targets in time;
- Develop an Implementation Plan to reach the targets in due course while staying competitive and offering a valid business case;
- Developing and implementing a communication campaign aimed at broader awareness of the waterborne transport sector and its commitment towards zero-emission transport, to become a fully sustainable mode of transport;
- Monitoring and assessing the implementation of the Strategy defined and adapting where necessary, after the project's conclusion, by the Green Shipping Expert Group.

The consortium functions as a Secretariat, where the broader expertise is involved in the **Scientific Committee (SC)** and the **Green Shipping Expert Group (GSEG)**[3] established by the project.

STEERER is funded by the European Commission research and innovation programme Horizon 2020, with a contribution by the EU of 1,5 million euro over the course of 36 months, and had started in December 2019. STEERER plays an important role in the execution of the co-programmed Partnership on Zero-Emission Waterborne Transport which is established in the context of the new programme for Research and Innovation: Horizon Europe.

[2] https://www.waterborne.eu/images/documents/201021_SRIA_Zero_Emission_Waterborne_Transport_spread.pdf
[3] https://www.waterborne.eu/projects/coordination-projects/steerer/green-shipping-expert-group/member-list?view=members

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1.2 Purpose of the Final Exploitation Plan

Deliverable D4.3 Final Exploitation Plan is the further development of the exploitation plan developed at proposal stage, and consolidated in the D4.1 Communication and Dissemination Strategy submitted at the beginning of the project. The exploitation plan has a particular focus on the uptake and further use of the achievements of STEERER:

1. the update of the Partnership's SRIA based on the STEERER advice;
2. the continuous collaboration with and experts' support from the STEERER Network (formerly the Green Shipping Expert Group) regarding the SRIA-related and other Partnership activities, including advice on specific projects issued in the framework of the Partnership;
3. reviewing and contributing to external developments that will help contribute to the Partnership activities or the faster uptake of its results (e.g. noteworthy policy or strategic decisions from the IMO, European Commission and other relevant stakeholders).

The Final Exploitation Plan document consists of three main parts divided in further chapters. The first part is focused on the updated communication and dissemination strategy and its outcomes including all the C&D activities done from the beginning of the project and the idea behind them, followed by a clear report of all activities.

The second part of the deliverable looks at the exploitation of the STEERER results including the advice to the ZEWT Research Agenda and its Implementation Plan.

The third part of the document focuses on the Green Shipping Expert Group, one of STEERER's main results, and, on the other, privileged contributors to the creation, communication and dissemination of STEERER's messages and how they play a significant role in exploiting STEERER results.

This document updates the D4.1 Updated Plan for the Communication and Dissemination of the Action, with a matured outline of the communication and dissemination strategy of the project and its outcomes. It also provides an analysis of the Key Performance Indicators of the C&D objectives and tools. The main purpose of the Communication and dissemination strategy has been to ensure appropriate actions are envisaged to inform, engage, create awareness and promote information about the project, its aims, funding source, outputs and impacts, as well as its wider societal implications beyond the project's naturally engaged community.

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To prevent a duplication of the D4.1 Updated Plan for the Communication and Dissemination of the Action, this document focuses on the actions taken rather than the reasoning behind planned actions already explained in the D4.1.

2. Communication and dissemination tools

The objectives for all communication and dissemination actions of the STEERER project are consistent with the relevant EU policy and are the following:

- Objective 1: Ensuring that target groups are convinced that as a result of European collaboration more was achieved and can be achieved in the future through European funded research and innovation activities;
- Objective 2: Highlighting the strategic importance and associated added value of the greening potential of the waterborne transport sector, creating widespread awareness, simultaneously promoting the sector and strengthening the visibility of the research and innovation landscape in Europe, with a particular emphasis on the wider society, press and the waterborne transport sector;
- Objective 3: Highlighting the importance of decarbonisation of the waterborne transport sector and its key role for the fulfilment of the EU's policy, particularly, the European Green Deal.
- Objective 4: Developing and implementing a communication campaign, aimed at broader awareness of the waterborne transport sector and its commitment towards zero-emission transport, to become a fully sustainable mode of transport.

It should be noted that the communication activities identified have the goal of communicating the project and its results to a wider audience (beyond the project's naturally interested community, i.e. wider society and press) and specifically of creating and executing an awareness campaign on the importance of waterborne transport and its commitment to become a fully sustainable mode of transport.

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2.1 Visual Identity

Following the requirements defined by the European Union regarding the acknowledgement of the support received under EU Programmes, all STEERER materials include a reference to Horizon 2020 funding. More particularly, the following elements are included in all project documents:

- The EU emblem with the mention of EU funding:

- Including the following disclaimer at the beginning of documents:

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The development of the visual identity of STEERER took into account the existing image of the Waterborne TP. As the leading European Technology Platform on research and development issues regarding the waterborne sector, associating STEERER's image with the Platform's **image had allowed for a more consistent and far-reaching communication and dissemination**, boosting the project's potential on this domain.

Particularly, for this purpose, a coherent and catchy project brand identity, a logo, templates for presentations (i.e. for conferences) and documents (i.e. report templates) were created.

Therefore, the logo developed incorporates several elements of Waterborne TP's logo, as seen below:

Figure 2: Waterborne TP and STEERER's logos

Further, having the logo as a basis, templates for both presentation and project documents have been created (Figure 3 and Figure 4)

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Figure 3: STEERER's Word Template

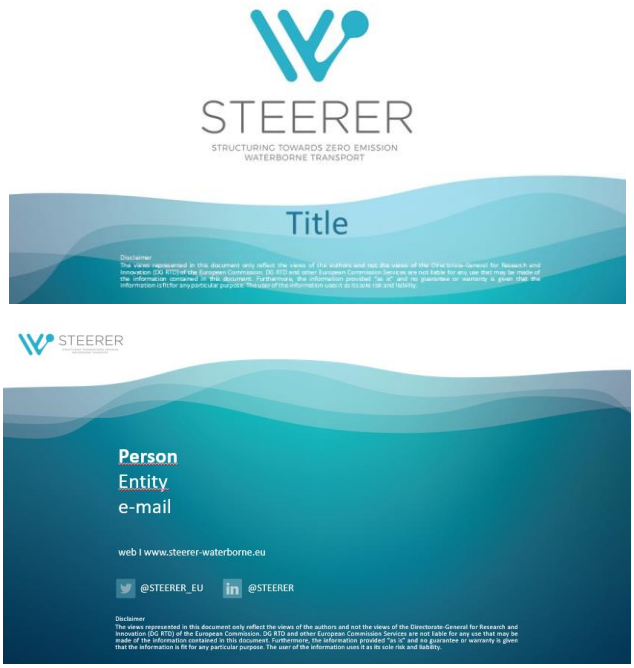

Figure 4 STEERER's PowerPoint Template

2.2 Communication & Dissemination materials

Project Leaflets

A number of project leaflets had been created during the lifetime of STEERER. A first version including a general overview of the project, with information on its goals, expected results and partners had been created in the first project year. A second version, which also included information on the call for members of the Scientific Committee and the Green Shipping Expert Group had also been created shortly after the first one (Figures 5 & 6).

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Figure 5 STEERER 1st general leaflet

Figure 6 STEERER general leaflet with call for experts

The second update of the flyer had been done during the third year of the project, in May 2022. The flyer had been created as a 4-page brochure in A5 format. It included preliminary results, project status and planned results for the end of the project. The content was written and approved by the whole STEERER consortium and also included updates to the logos that have changed since the first version of the flyer (Figures 7 & 8).

The flyer was printed in two batches of small copies (50 copies each time) with the aim to be distributed at Maritime Forum in Netherlands and Transport Research Arena 2022 in Lisbon. The detailed information on the events is described in Section 3.3.7.

Figure 7 STEERER 2nd leaflet A side

Figure 8 STEERER 2nd flyer B side

Project roll-ups

Two roll-ups had been produced in the beginning of the project with the purpose to be used for GSEG meetings and other events where STEERER would be present. The two roll-ups have been designed in similar fashion with same information but each one reflects the maritime and inland waterway focus of the STEERER project (Figures 9).

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Figure 9 STEERER Roll-ups: Maritime (left) and Inland (right)

Project Video(s)

The general project video had been produced in October 2021 with the intention to promote the strategic importance of the waterborne sector and the main objectives of the project (i.e. the advice towards the ZEWT Partnership's Strategic Research and Innovation Agenda and Implementation Plan). The video had been shared with the STEERER network and via project's social media channels. The video had been created as an animation video in collaboration with an award-winning animation studio Lightbox based in Portugal. The script for the video storyboard and voiceover had been produced with inputs by the whole project consortium and coordinated by Magellan Association.

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Few shots of the video are available on the following pages while the full video can be watched on Youtube.

Figure 10 STEERER project video scene 1

Figure 11 STEERER project video scene 2

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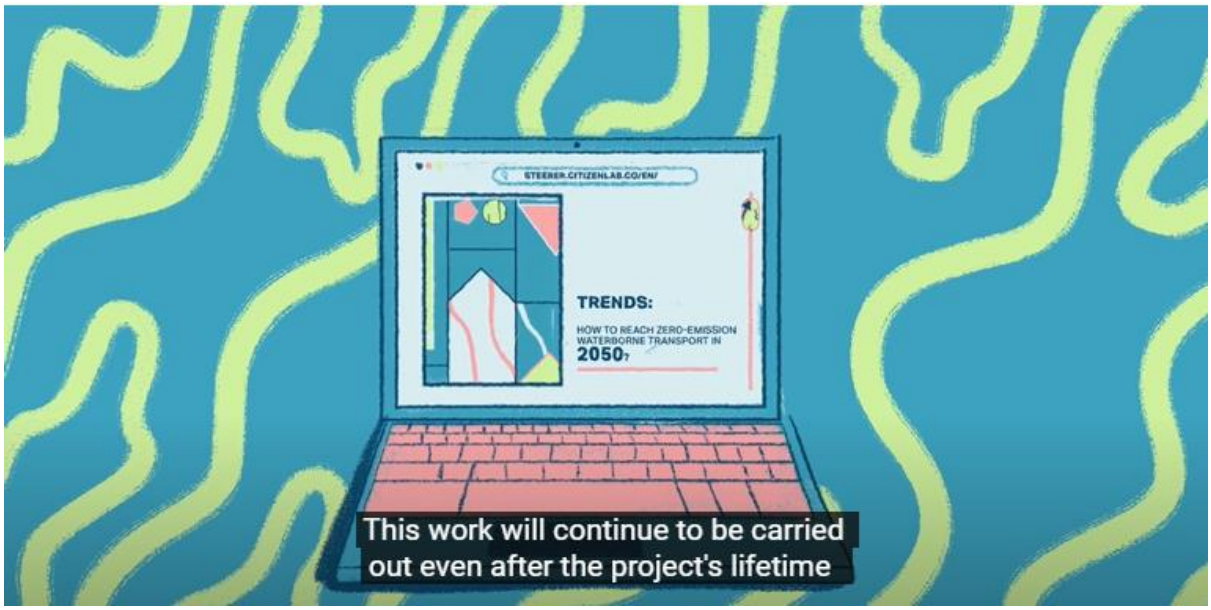

Figure 12 STEERER project video scene 3

Furthermore, a series of other video interviews with the STEERER Ambassadors [4]had been made available in STEERER's social media. A total of 8 videos had been produced internally and with the support of the ambassadors during the project duration. A detailed description of their role can be found in paragraph 2.6 of this deliverable.

E-Newsletters

STEERER's strategy had foreseen the preparation of at least 3 digital project newsletters, including news and updates on the project and relevant associated events. The timing of these newsletters was set to be aligned with specific relevant project milestones. A total of 8 newsletter had been sent out until November 2022 (see Table 2). The newsletters had been sent out to Waterborne TP's mailing list and the STEERER mailing list. The mailing list has also been used to promote the final event and the STEERER surveys for the GSEG.

The STEERER mailing list is saved on Mailchimp email marketing platform and counts 159 contact that have subscribed to it through the relevant form on STEERER's website.

[4] In STEERER the ambassadors are composed by selected professionals highly knowledgeable in the waterborne transport sector who borrows their competencies to the project in order to convey powerful messages about the importance of the waterborne transport from different point of views.

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The table below resumes all published newsletter as well as the content included as highlights.

Newsletter #	Date published	News included
Newsletter #1	16 May 2020	Green Shipping Expert Group formed, European Partnership on Zero-Emission Waterborne Transport, STEERER website live, STEERER Ambassadors campaign
Newsletter #2	29 October 2020	Green Shipping Expert Group members page on website, Draft version of the SRIA, Digital strategy for wider audience, Two new STEERER ambassadors
Newsletter #3	10 May 2021	Trends[5] evaluation survey, STEERER launches digital communication campaign for citizens, Two new STEERER ambassadors, Green Shipping Expert Group holds first ever meeting (online)
Newsletter #4	4 November 2021	Outcomes of the first GSEG meeting, New deliverables published: D2.1. State-of-Play of Decarbonisation of waterborne transport "technology application atlas" and D3.3 Results of the first consultation phase: Trends and drivers for change, , STEERER Launches the new "Mapping Waterborne Frontrunners" Campaign on CitizenLab, STEERER video animation, Engaging Citizens in Decarbonising Waterborne Transport Event at the #EURegionsWeek, Article on STEERER in the Open Access Government Magazine, New STEERER Ambassador
Newsletter #5	23 March 2022	Outcomes of the #H2020 Waterborne Transport Workshop, New deliverables D2.2 STEERER waterborne transport decarbonization scenarios for 2025, 2030 and 2050 now submitted and available and D3.4 Results of the Second Consultation Phase: Scenarios and Targets 25-30-50 available, 3rd meeting of the GSEG, New STEERER ambassador dual video
Newsletter #6	21 July 2022	Save the date for STEERER final event, 4th meeting of the GSEG group announcement, STEERER at the TRA2022, Frontrunners campaign continues, Deliverables D2.3 Areas of Intervention

[5] Trends evaluation: How to reach zero-emission waterborne transport in 2050?

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		and Relevant Actions - Implementation Plan and D3.5 Results of the Third Consultation Phase: Priorities & SWOT now available, STEERER in other events
Newsletter #7	11 November 2022	Outcomes of the STEERER final event "Exploration of future waterborne transport", 4th GSEG meeting outcomes, STEERER at TRA2022 information, STEERER decarbonization targets presented in the IMO discussions, Deliverables D2.3 and D2.5 available

Table 1 List of STEERER newsletters

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STEERER

NEWSLETTER

Outcomes of the STEERER final event "Exploration of future waterborne transport"

After 3 years, the STEERER project is reaching its end. The final conference was organised on **12 October** at the **Beacon** innovation center in **Antwerp, Belgium**.

The event "Future Exploration of Waterborne Transport" was an outside-the-box interactive event aimed to bring life to ideas on **how to tackle the climate challenges**. After the inspiration session in the morning part, the participants were split in nine teams with the goal to develop a prototyping canvas that would solve rising climate change issues. During the early afternoon the participants were introduced to the **four technical sites in Antwerp that are implementing sustainable waterborne solutions** including: Deme offshort simulator, 1st hydrogen refueling station and vessel Hydroville, FAST by Euronav and Seafar.

The event brought together more than 90 participants of different backgrounds and expertise but always related to waterborne transport.

Discover the winning team's C-HIVE canvas below and access the master slides of the morning session via this link.

Figure 13 STEERER Newsletter #7 November 2022

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Project presentation

An overall project presentation (PowerPoint) had been created in the beginning of the project. This document has been updated as the project unfolded and dully adapted considering the target audiences it had been used for.

Figure 14 STEERER General Presentation slide 1

Figure 15 STEERER General Presentation slide 2

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2.3 Website & Social Media

Project website

Following the strategy of ensuring that STEERER's image is easily associated with the Waterborne TP for a more consistent and far-reaching communication and dissemination, the project website had been included in the website of Waterborne TP (http://steerer-waterborne.eu/). This will also ensure the continuity of the website after the project conclusion and it will increase the visibility of the Waterborne TP as well as of the main project results.

The **project website,** created in May 2020 with the company Loft33 and since then regularly updated, has served as the main repository of project-related information (with sections such as project information, results, partners, events, hyperlinks to social media, etc.).

The website is user-friendly, ensuring that its visitors can easily click through it and find the right information immediately (the purpose of the website). The website also has a user-centred and responsive design, easily accessible in different devices: browsers, smartphones, tablets and smart TV.

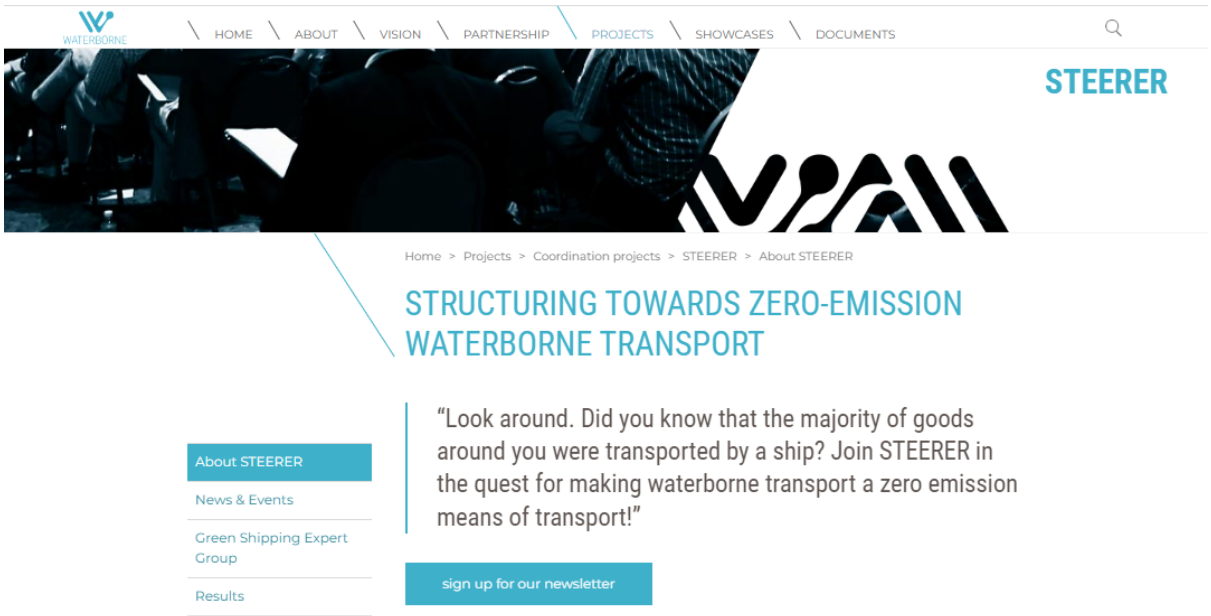

Figure 16 STEERER Website - About page

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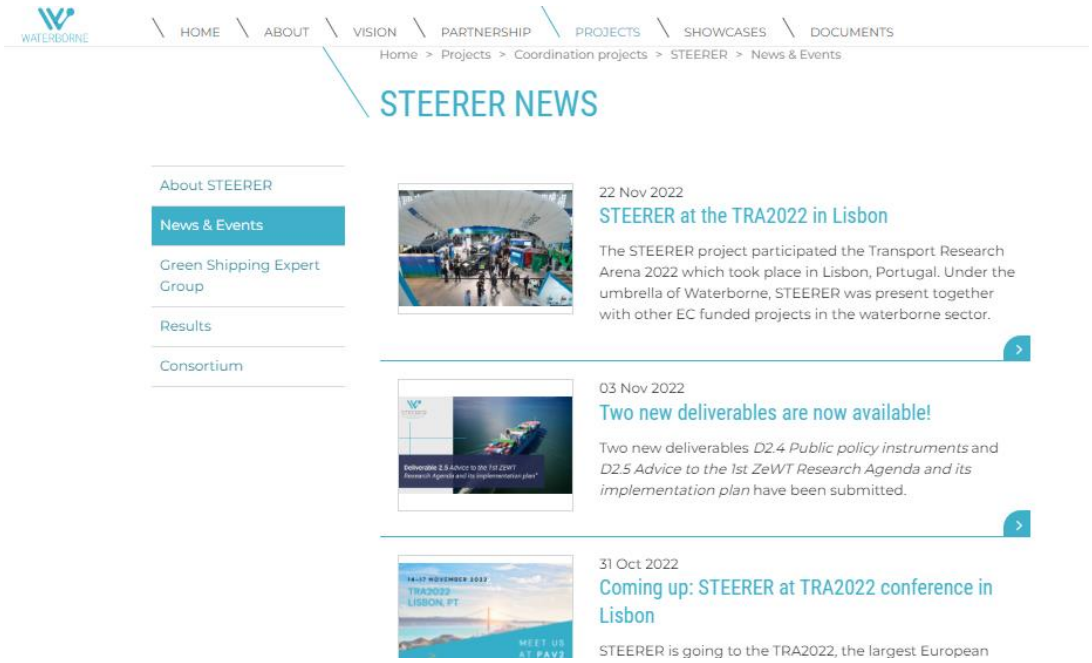

Figure 17 STEERER Website - News page

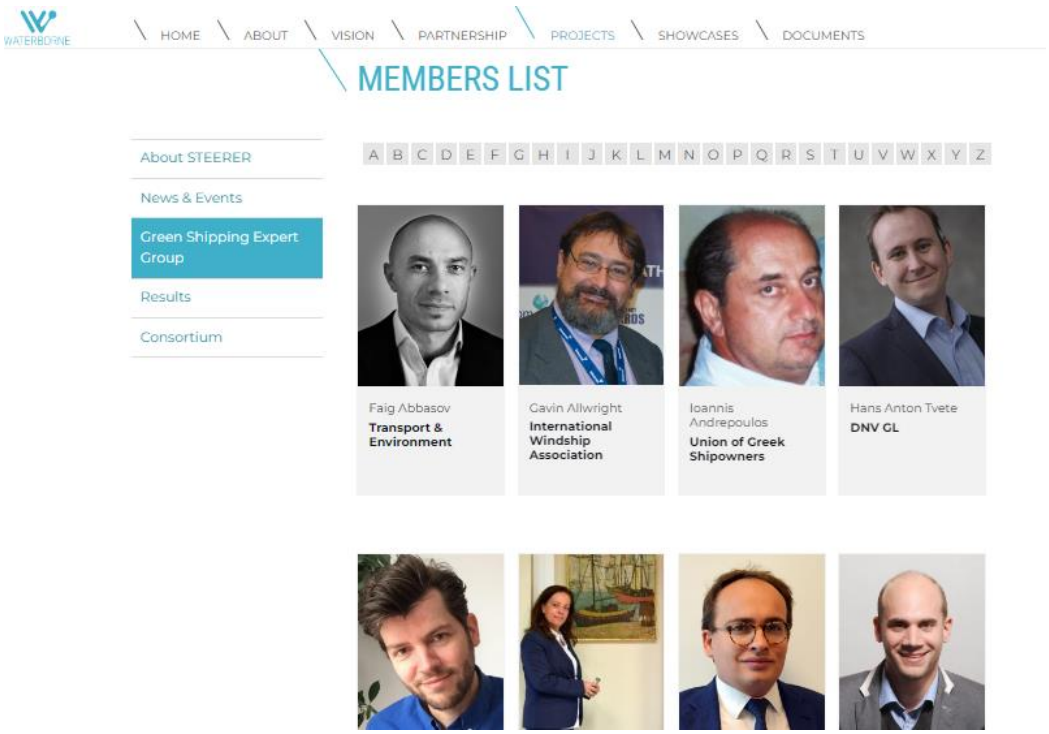

Figure 18 STEERER Website - GSEG list

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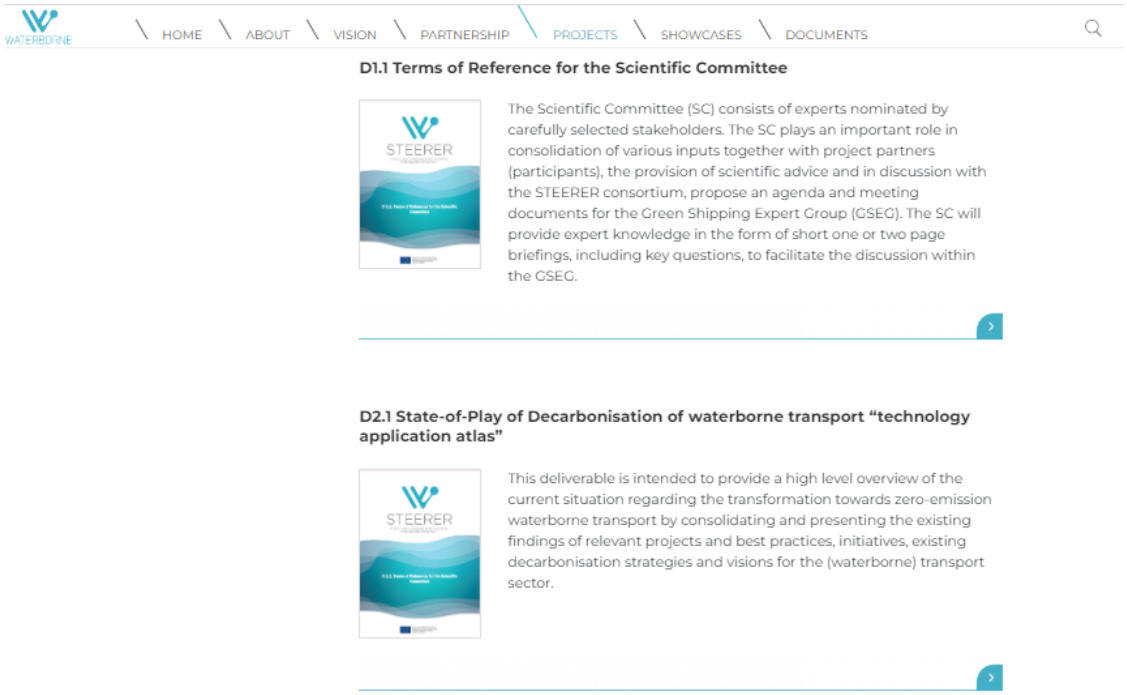

Figure 19 STEERER Website - Results page

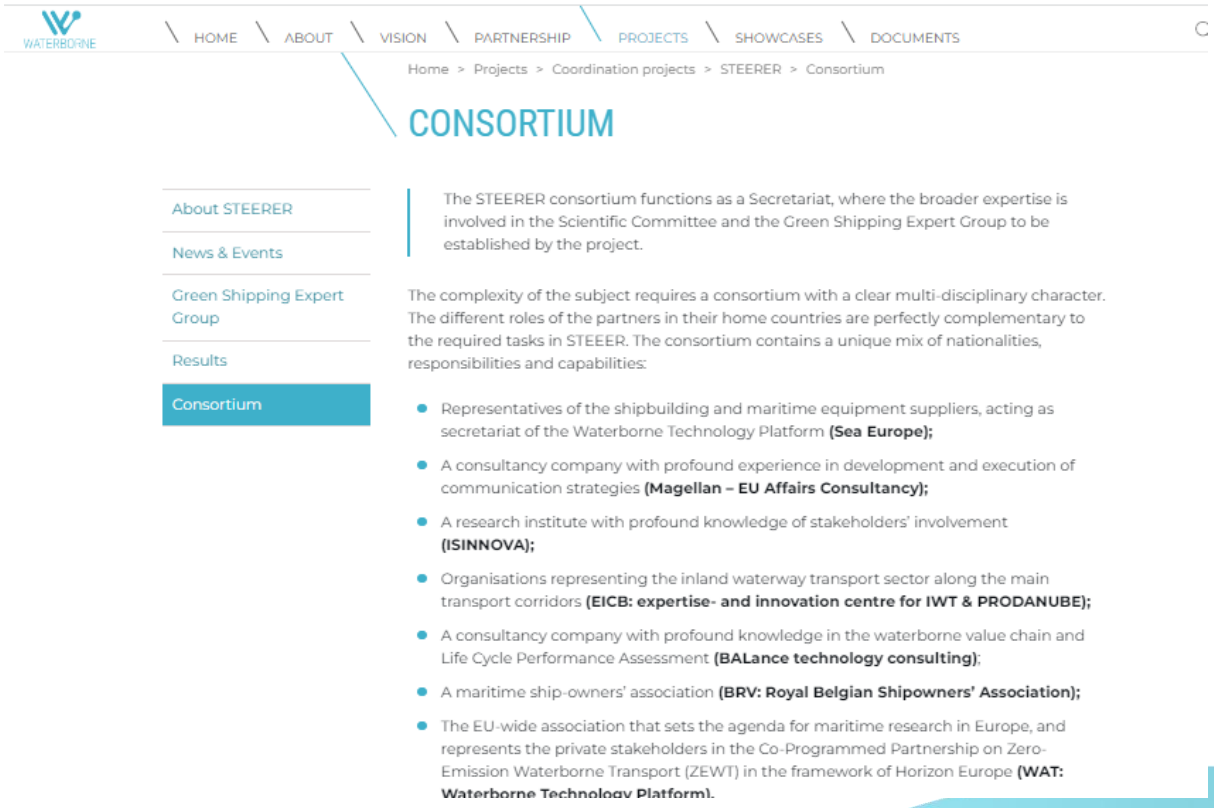

Figure 20 STEERER Website - Consortium page

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Statistics

Google Analytics had been used to track the website traffic and monitor external interest in the project. In particular, with Google Analytics we can determine which keywords attract the most stakeholders, which ad receives the most comments and which landing pages and content are most visited. The most visited page besides the obvious "About" page is the news post about the "Waterborne Transport Workshop" which took place in February 2022. A detailed analysis has been included below (Figure 21). The website is also compliant with the General Data Protection Regulation.

Page	Pageviews	Unique Pageviews	Avg. Time on Page
	6,958 % of Total: 7.85% (88,656)	5,110 % of Total: 7.66% (66,722)	00:01:29 Avg for View: 00:01:10 (28.24%)
1. /projects/coordination-projects/steerer/about-steerer	**1,485** (21.34%)	1,162 (22.74%)	00:01:13
2. /projects/coordination-projects/steerer/	**875** (12.58%)	623 (12.19%)	00:01:05
3. /projects/coordination-projects/steerer/news-events/steerer-waterborne-transport-workshop	**645** (9.27%)	447 (8.75%)	00:02:07
4. /projects/coordination-projects/steerer/news-events	**616** (8.85%)	424 (8.30%)	00:01:01
5. /projects/coordination-projects/steerer/news-events/waterborne-transport-workshop-presentations	**609** (8.75%)	271 (5.30%)	00:01:49
6. /projects/coordination-projects/steerer/green-shipping-expert-group	**535** (7.69%)	418 (8.18%)	00:00:42
7. /projects/coordination-projects/steerer/results	**459** (6.60%)	349 (6.83%)	00:02:09
8. /projects/coordination-projects/steerer/green-shipping-expert-group/member-list?view=members	**450** (6.47%)	364 (7.12%)	00:02:57
9. /projects/coordination-projects/steerer/consortium	**268** (3.85%)	234 (4.58%)	00:01:08

Figure 21 STEERER Website page visits (May 2020 - December 2022)

Social Media

Social media has astounding potential for reaching the target groups of the project – particularly the wider audience – with reduced associated costs, allowing for the creation of communities of support for the project's key messages. For the ultimate goal of ***developing and implementing a communication campaign, aimed at broader awareness of the waterborne transport sector and its commitment towards zero-emission transport*** digital activation through social media will be one

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of the cornerstones of the communication & dissemination strategy of STEERER. Such is the case due to a) it entailing low financial investment actions and b) posing no barriers for an effective widening campaign for all EU Member States.

The project had ensured a strong social media presence through its Twitter, LinkedIn and YouTube pages, using visual media, videos, info-graphic imagery, mobile-enabled content and richer content experiences for users of any of the project's digital platforms. All social media pages have adopted a coherent and cohesive visual approach and language, with the project's key messages outlined from the early stage of the project.

The strategy for Twitter had been based on a more informative and institutional tone; for LinkedIn, a bet on infographics and interactions with STEERER's ambassadors had been foreseen; YouTube had been serving as a repository for the different videos produced, with clear and attractive language, to be shared in the other channels.

The strategy behind the management of STEEFER's social media had been based on a balanced mix of a proactive and reactive social media management approach. A **proactive approach** is one in which the social media content strategy is implemented by considering what the target groups would like to be informed about, creating content that anticipates their needs (i.e. weekly posts about the project, project news). An operationalisation of this approach consists of the creation of several posts presenting the Ambassador interviews (for more information see section 3.1.6. STEERER Ambassadors).

A **reactive approach,** as the name implies, is more linked with reacting to external sources (current policy developments, viral matters about waterborne transport, other research & development news, among others) with the goal of engaging the audience in interaction. The Figure below is an example of how this approach will be implemented.

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Figure 22: Social Media Post following the reactive approach

In other to implement this approach, several actions will be taken. In the case of Twitter, its core function is to react immediately as events unfold and information is made available, to be shared with the target groups as soon as they are known.

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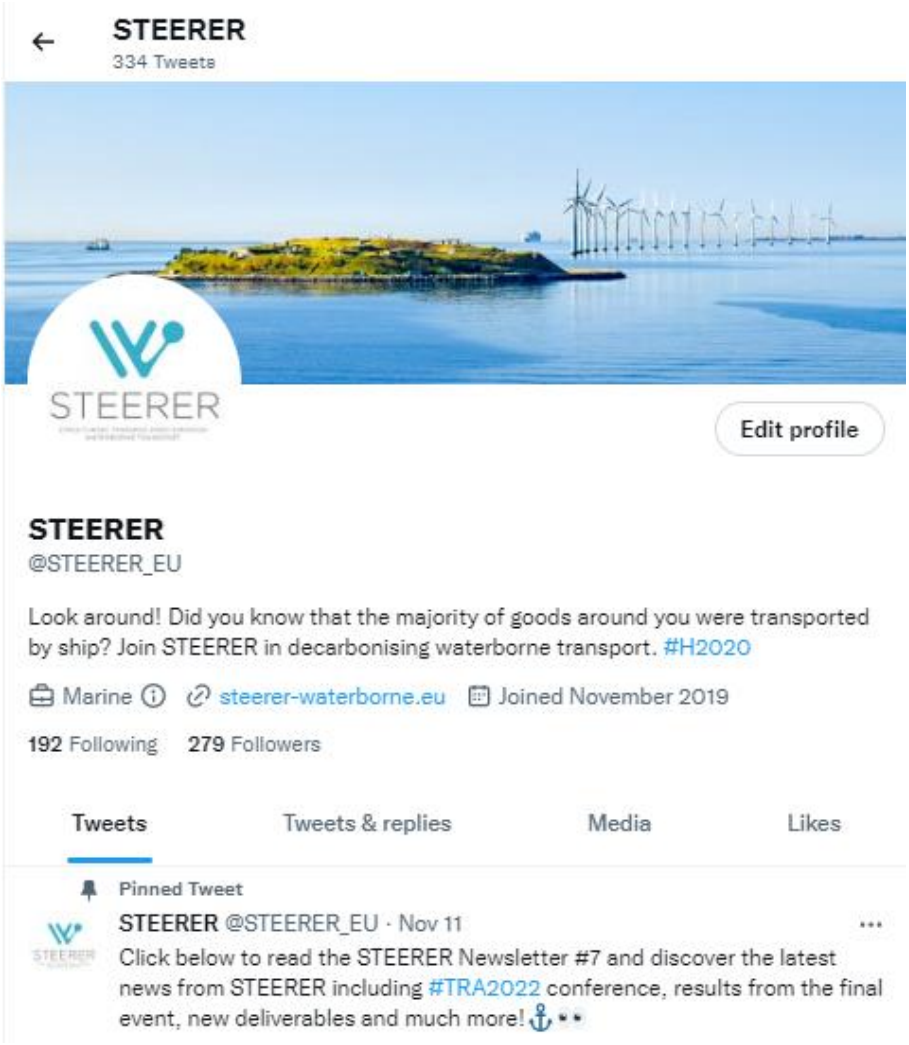

Figure 23 STEERER Twitter page - November 2022

The main difference in approach for the management of LinkedIn, in comparison to Twitter, is focused on the type of stakeholder it reaches. LinkedIn is primarily a professional, business-oriented platform which, in itself, will mean that more waterborne transport stakeholders are expected to be drawn to STEERER's pages.

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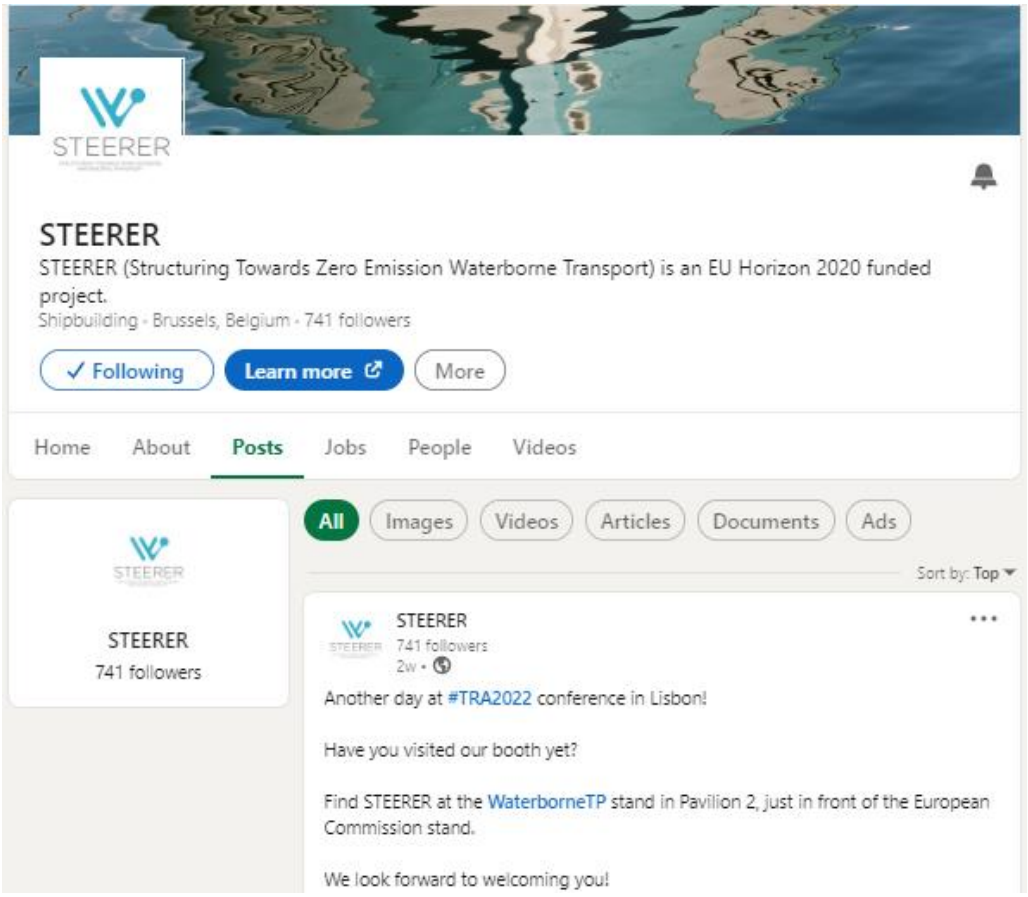

Figure 24 STEERER LinkedIn Page - November 2022

For the purpose of engagement with relevant stakeholders, the STEERER's account had followed a wide array of relevant waterborne transport sector representatives (from inland navigation to maritime shipping, from associations to industry, etc.). Further, STEERER's social media account had followed several EU-managed accounts and other EU-funded projects in the domain of greening the waterborne transport sector, to promote synergies and allow for cross promotion. Finally, from all social media channels, LinkedIn had been the primary channel to engage with the stakeholders as well as the wider society through creative, to the point, attention-grabbing posts.

Additionally, the Communication and Dissemination team had followed closely news outlets, EU institutions websites, and academic publications related to waterborne and used them as inspiration for more proactive posts. In other words, posts have been made considering relevant news/advancements on the decarbonisation of shipping, highlighting their relevance and interconnection with STEERER e.g. the 2021 Suez Canal Obstruction.

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The biggest communication and dissemination challenge of the project had been how to reach a wider audience. The following are a few examples of messages that had been shared with the wider audience to bring their attention to the importance of STEERER in the framework of the **CitizenLab campaign**:

- To frame the impact of waterborne transport in the total volume of world trade, as the main means of transporting goods (specifying household goods that will make the most sense to citizens) and as responsible for around 90% of the world's trade volume and about 81% of EU trade;
- To disclose the current carbon footprint of waterborne transport and compare it with the carbon footprint of road, rail and air transport. Through this comparison, the current perception of the wider society, which is prejudiced to oil tankers, spills in the oceans and fishing vessels that *"cause not only imbalance in maritime ecosystems, but also pollution on the high seas.",* had been addressed. This is an existing misperception of the citizens;
- By disclosing the message that waterborne transport is responsible for most of the world's trade routes and is the most energy-efficient mode of transport, it will become easier for people to understand the logic of investing in research and new technologies not only to develop less polluting vessels but above all, more efficient ones, which can even absorb a % of the carbon footprint of the other means of transport (i.e. through a modal shift).
- Other important messages had been promoted for awareness raising and action taking from the wider society. For instance, the impact shipping has on citizen's everyday life had been highlighted (i.e. if one looks around the room the majority of goods therein were transported with ships). Another important message was the change in the attitudes of the citizens (i.e. as they expect to order goods online and be able to return them for free, putting additional pressure on shipping costs and emission values). These are just a few examples of additional messages that had been conveyed;
- All these had allowed to grab the attention of the wider audience, whilst creating sympathy for the project's cause.

The project had created a targeted campaigns for the wider society, with a very clear campaign goal/theory of change: to raise awareness, among the wider society, about the importance of improving environmental performance and moving towards the goal of zero emission waterborne transport. More information on the targeted campaigns is in the Section 2.5.

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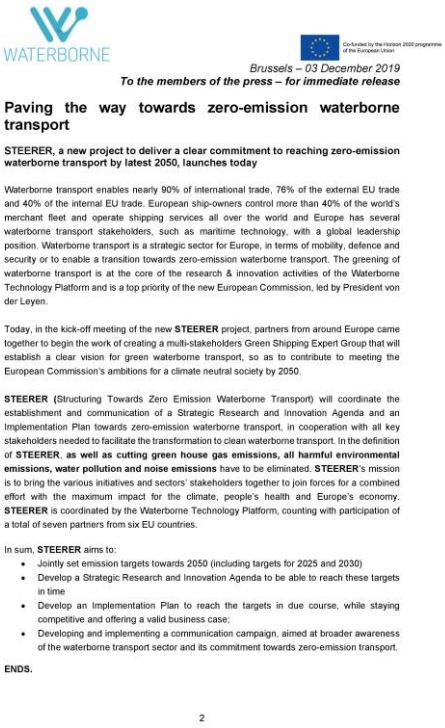
2.4 Media Relations

A series of press releases has been published in coordination with Waterborne TP.

The first STEERER press release, with the aim of announcing the kick-off of the STEERER project, was sent out on December 3rd 2019, resulting in the publication of news items.



WATERBORNE

Co-funded by the Horizon 2020 programme of the European Union

Brussels – 03 December 2019

To the members of the press – for immediate release

Paving the way towards zero-emission waterborne transport

STEERER, a new project to deliver a clear commitment to reaching zero-emission waterborne transport by latest 2050, launches today

Waterborne transport enables nearly 90% of international trade, 76% of the external EU trade and 40% of the internal EU trade. European ship-owners control more than 40% of the world's merchant fleet and operate shipping services all over the world and Europe has several waterborne transport stakeholders, such as maritime technology, with a global leadership position. Waterborne transport is a strategic sector for Europe, in terms of mobility, defence and security or to enable a transition towards zero-emission waterborne transport. The greening of waterborne transport is at the core of the research & innovation activities of the Waterborne Technology Platform and is a top priority of the new European Commission, led by President von der Leyen.

Today, in the kick-off meeting of the new **STEERER** project, partners from around Europe came together to begin the work of creating a multi-stakeholders Green Shipping Expert Group that will establish a clear vision for green waterborne transport, so as to contribute to meeting the European Commission's ambitions for a climate neutral society by 2050.

STEERER (Structuring Towards Zero Emission Waterborne Transport) will coordinate the establishment and communication of a Strategic Research and Innovation Agenda and an Implementation Plan towards zero-emission waterborne transport, in cooperation with all key stakeholders needed to facilitate the transformation to clean waterborne transport. In the definition of **STEERER**, **as well as cutting green house gas emissions, all harmful environmental emissions, water pollution and noise emissions** have to be eliminated. **STEERER**'s mission is to bring the various initiatives and sectors' stakeholders together to join forces for a combined effort with the maximum impact for the climate, people's health and Europe's economy. **STEERER** is coordinated by the Waterborne Technology Platform, counting with participation of a total of seven partners from six EU countries.

In sum, **STEERER** aims to:

- Jointly set emission targets towards 2050 (including targets for 2025 and 2030)
- Develop a Strategic Research and Innovation Agenda to be able to reach these targets in time
- Develop an Implementation Plan to reach the targets in due course, while staying competitive and offering a valid business case;
- Developing and implementing a communication campaign, aimed at broader awareness of the waterborne transport sector and its commitment towards zero-emission transport.

ENDS.

2

Figure 25: STEERER's Press Release 1

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Date	Title	Outlet	Link
03/12/2020	Paving the way towards zero emission waterborne transport	Indanube	https://indanube.eu/2019/12/03/paving-the-way-towards-zero-emission-waterborne-transport/
03/12/2020	Paving the way towards zero emission waterborne transport	Fathom.World	https://fathom.world/paving-the-way-towards-zero-emission-waterborne-transport/
18/01/2020	STEERER project: Paving the way towards zero-emission waterborne transport	OnTheMosway	https://www.onthemosway.eu/paving-the-way-towards-zero-emission-waterborne-transport/?cn-reloaded=1

The second press release was published on 18 December 2020 with the title "Green shipping experts begin activities for zero emission future" and focused on the 1st meeting of GSEG.

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STEERER

To the members of the press – for immediate release

Green shipping experts begin activities for zero emission future

EU funded STEERER project kick starts the work of the newly formed Green Shipping Expert Group with first workshop

18 December 2020 – The Green Shipping Expert Group (GSEG) of the EU-funded project **STEERER** (Structuring Towards Zero Emission Waterborne Transport) held its first workshop on Wednesday, 16 December 2020 with 50 experts representing the broader waterborne transport sector. The group including high level representatives of ports, research organizations, industrial associations, shipowners, NGO's and administrations from across Europe has been formed this June following an open call for expressions of interest.

The Green Shipping Expert Group is core to the STEERER project's activities and will provide recommendations to the Waterborne Technology Platform and the Zero Emission Waterborne Transport Partnership (ZEWT), concerning the achievement of zero-emission waterborne transport and the strategic Research, Development and Innovation that is required to make this possible. This will be set in the context of public policies, regulations, investment priorities and the market measures needed to boost this transition. The project will monitor activities and recommend yearly updates to the ZEWT Strategic Research and Innovation Agenda, to ensure that it is aligned with the latest developments and most effectively enable achievement of the partnerships goal to demonstrate by 2030 deployable zero emission waterborne transport solutions suitable for all main ships types.

In the first workshop held on 16th December 2020, the experts focused on defining the main trends influencing the transition towards zero emission waterborne transport. The experts were divided in 6 groups with a focus on: political, economic, social, technological and environmental aspects of the transition.

According to Peter Crawley, Policy officer Waterborne Transport, DG RTD of the European Commission, "The launch of STEERER is timely and important. The EU is committed to cutting transport emissions by 90%. Last week the European Commission launched its sustainable and smart mobility strategy and the European Council meeting endorsed a 55% decarbonisation target by 2030. A range of a regulatory and market measures are expected to make this happen. However, there is wide agreement that RD&I plays a critical role to provide the solutions that are needed to make this possible as well supporting Europe's leadership in green shipping technologies. The foreseen Zero Emission Waterborne Transport (ZEWT) Partnership in the framework of Horizon Europe is central to the EU's waterborne RD&I strategy and the activities

2

A third press release was published in February 2022 following the waterborne transport workshop organised by CINEA and STEERER. Additionally, several pages about the project have been published and are still live, as shown in the table on the following page.

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Page	Type	Link
CORDIS	Project Description	https://www.prodanube.eu/news/162-steerer-project-an-important-step-ahead-towards-zero-emission-waterborne-transport
Magellan's website	Project Description	https://magellan-association.org/en/portfolio/steerer/
Waterborne TP's website	Project Description	https://www.waterborne.eu/projects/coordination-projects/steerer/
PRODANUBE's website	Project Description	https://www.prodanube.eu/news/162-steerer-project-an-important-step-ahead-towards-zero-emission-waterborne-transport
ISINNOVA's website	Project Description	https://www.isinnova.org/portfolio-items/steerer/
BALance website	Project Description	https://www.bal.eu/BAL_Webseite
SEA Europe's website	Project Description	https://www.seaeurope.eu/projects

Table 2: Project Related Pages

Open Access Government

A two-page STEERER article written by Waterborne TP has been published in the 500-pages Open Access Government October 2021 publication.

Open Access Government is an international publication providing an in-depth perspective on key public policy areas from all around the world, including health and social care, COVID-19, research and innovation, technology, government, environment and energy.

The STEERER article is featured on pages 412-413 and can be accessed directly here.

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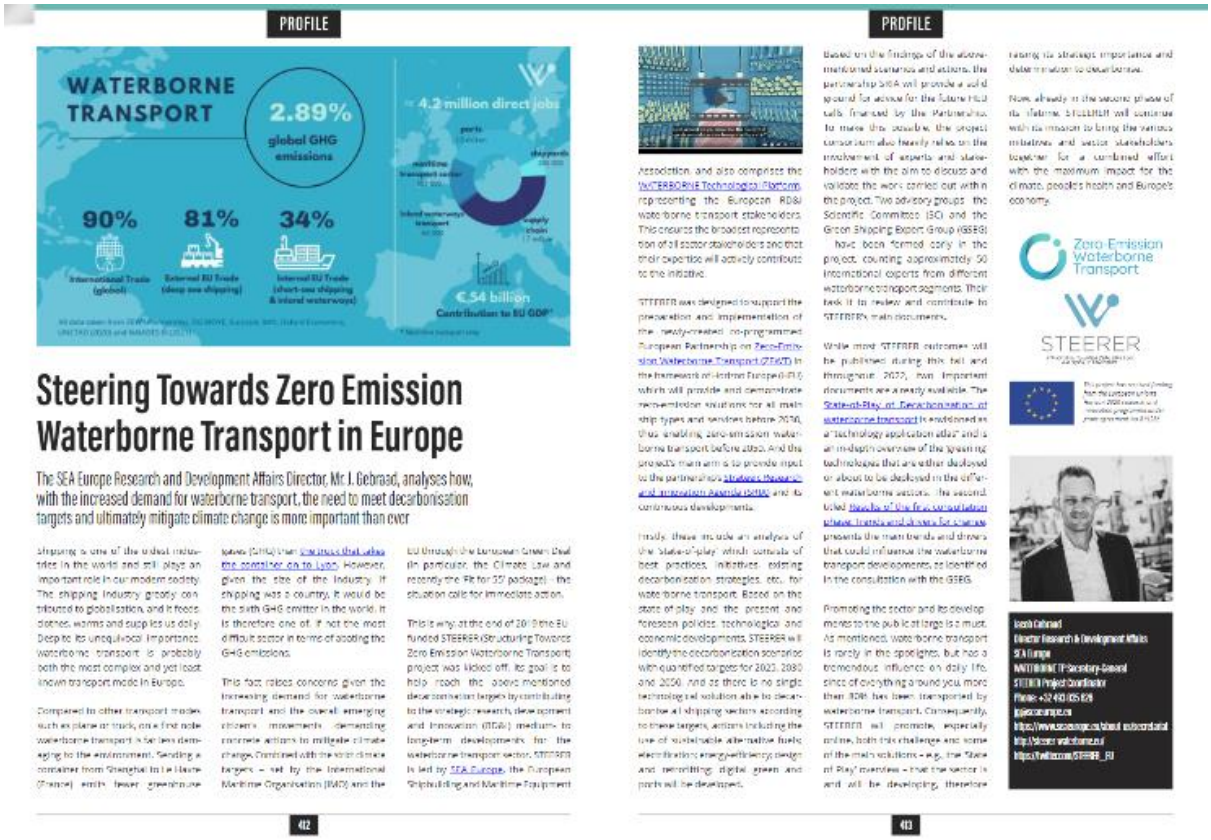

Figure 26 STEERER Article in Open Access Government

Scheepvaartkrant Magazine

An article about STEERER has been published in “Scheepvaartkrant”, one of the large IWT newspapers in the Netherlands in July 2022.

STEERER partner Salih Karaarslan, EICB, has contributed to the article titled "STEERER reaches the end - This is of strategic importance for greening".

The article is in Dutch only and it explains the strategic importance of the STEERER project for the future of RD&I in and greening of Inland Waterways Transport (IWT).

The link to the digital version of the newspaper edition (week 28-29) is available here.

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993 | WEEK 28-29
13 JULI 2022

Eerste schip nieuwe nationale onderzoeksvloot gedoopt

LAUWERSOOG **Onderzoeksschip RV Adriaen Coenen is woensdag 6 juli gedoopt bij Next Generation Shipyards in Lauwersoog, waar het schip is gebouwd. Met de doop is een nieuwe fase bereikt in de vervanging van de nationale onderzoeksvloot.**

Na jaren van voorbereiding komt binnenkort het eerste en kleinste schip van de nieuwe onderzoeksvloot in de vaart. Rond 22 juli, as het afronden van de laatste testen, zal RV Adriaen Coenen naar de thuishaven van het Koninklijk Nederlands Instituut voor Onderzoek der Zee (NIOZ) op Texel varen om daar RV Stern te vervangen. Aan de vervanging van de twee grotere onderzoekschepen wordt nog hard gewerkt door het NIOZ, dat de nationale onderzoeksvloot beheert.

Directeur van het NIOZ, Han Dolman: "We hebben goed gekeken naar de mogelijke bouw en energieverbruik. Albert Kelzer, directeur van NG Shipyards: "Het schip is gebouwd met zonne-energie, het vaart op een volledige biobrandstof, en het AdBlue-systeem op de uitlaat beperkt de stikstofuitstoot." Beide directeuren benoemden de voortvarende samenwerking aan het innovatieve schip dat geheel volgens planning binnen slechts een jaar gebouwd is.

Wantijen

RV Adriaen Coenen is voorzien van werkplekken voor twee bemanningsleden en twaalf opvarenden, zoals wetenschappers, assistenten, studenten en andere passagiers. Met een geringe diepgang van 85 centimeter kan het schip de wantijen in de Waddenzee rond hoogwater passeren en daarnaast ook droogvallen op zandplaten. Het nieuwe vaartuig kan ook ingezet worden voor licht duwen sleepwerk van bijvoorbeeld het mobiele vogelobservatieplatform de 'Wadtoren'. Het schip is voorzien van natte en droge laboratoria, ICT infrastructuur, communicatiemiddelen, hijswerktuigen en een ruim werkdek met ruimte voor twee rubberboten of een 10ft container. Schipper Wim Jan Boon is blij met het nieuwe schip: "Het is een stil schip, wat heel prettig is voor bemanning, onderzoekers en omgeving. En doordat de computer het schip automatisch op de gewenste plek houdt tijdens onderzoek, kan ik efficiënter werken."

Waterjets

Bouwbegeleider Feico Hoogeveen van NAVIS: "De romp van de Adriaen Coenen is ontworpen door gebruik te maken van Computational Fluid Dynamics (CFD) simulaties voor optimalisatie van de hydrodynamische eigenschappen. Voor de aandrijving zijn waterjets toegepast, zodat het schip makkelijk in ondiep water kan opereren en goed kan droogvallen zonder kans op schade aan de voorstuwers."

Voor de energieopwekking wordt gebruik gemaakt van Hydro-treated Vegetable Oil (HVO), een biologische dieselvervanger. Dit zorgt voor een belangrijke emissiereductie: 90 procent minder fossiele CO_2-uitstoot. In combinatie met roetfilters en een katalysator op de uitlaten is dit minstens gelijkwaardig aan de emissiereductie die wordt bereikt met methanol. Door toepassing van het AdBlue-systeem op de uitlaat wordt ook nog eens een aanzienlijke stikstof reductie bereikt. De koelwatersystemen hebben een warmteterugwinningsysteem. De ledverlichting gaat werken met bewegingssensoren en zonnepanelen. Er wordt maximale thermische isolatie toegepast, zodat ook het energieverbruik voor verwarming zo laag mogelijk is.

OP KOERS

Salih Kavsanlar

Elke twee weken komt in deze rubriek in de Scheepvaartkrant een van de medewerkers van Bureau Telematica Binnenvaart (BTB), Expertise en Innovatiecentrum Binnenvaart (EICB) en het Bureau Voorlichting Binnenvaart (BVB) aan het woord over een project waar volop aan gewerkt wordt om de binnenvaartsector nog verder te laten doorstomen. Deze rubriek wordt samengesteld door de samenwerkende organisaties.

STEERER NADERT SLOT

'Dit is van direct strategisch belang voor vergroening'

Het Europees project STEERER nadert zijn voltooiing. Op 12 oktober is de slotbijeenkomst in Antwerpen. Hier zal worden vooruitgeblikt op de route naar een emissievrije scheepvaartsector in het streefjaar 2050. Ook zijn dan relevante demonstratieprojecten te bezoeken.

Waarom is STEERER een belangrijk project?

De afgelopen drie jaar hebben wij binnen STEERER samen met partners onderzoek gedaan naar vergroeningsmogelijkheden van de scheepvaartsector. Onze conclusies dragen bij aan het vernieuwen van de Strategic Research and Innovation Agenda, ook wel bekend als SRIA. Deze SRIA geeft aan voor welke innovatievraagstukken geld vrijgemaakt zal worden in de nabije toekomst. Geld dat afkomstig is vanuit het meerjarige Europese programma Horizon Europe. STEERER is daarmee direct van strategisch belang voor de vergroeningsagenda van onze sector in de komende jaren. STEERER speelt niet voor niets een centrale rol binnen het zogenoemde 'Co-Programmed Partnership on Zero-Emission Waterborne Transport' (ZEWT). Dat is het partnerschap tussen de Europese Commissie en het bedrijfsleven, vertegenwoordigd in het Waterborne Technology Platform, dat zich volledig richt op emissievrije vervoer over water."

Wat is volgens jou de belangrijkste uitkomst van het onderzoek?

"De belangrijkste conclusie is toch wel dat de emissiereductie in de scheepvaart in een stroomversnelling moet komen om te voldoen aan het klimaatakkoord van Parijs, en de stijging van de gemiddelde wereldtemperatuur te beperken tot onder de 1,5 graden Celsius. Omdat er niet één oplossing is om aan de doelstelling te voldoen, zijn er zes zogeheten interventiegebieden benoemd. Dat zijn: gebruik van duurzame alternatieve brandstoffen, elektrificatie, energie-efficiency, ontwerp en retrofit, digitale vergroening en alles rondom havens."

Wat moet er dan concreet gebeuren op die zes terreinen?

"Binnen ieder van deze zes gebieden zijn acties benoemd rondom drie thema's: technisch, juridisch en economisch. Dit levert een waslijst op per thema en interventiegebied. Een concreet voorbeeld is het versneld toepassen van methanol aan de hand van retrofit kits. Een ander voorbeeld is het vaststellen van gedeelde standaarden voor verdere elektrificatie. Een groot deel van deze actiepunten moet dus opgepakt worden in nieuwe R&D-projecten van het Horizon Europe innovatiefonds."

Wat is de volgende uitdaging?

"De Europese Commissie zal tot 530 miljoen euro bijdragen aan acties die vallen binnen de scope van het ZEWT partnerschap. De deelnemende partners uit de private sector hebben afgesproken om tot en met 2030 zo'n 3300 miljoen te zullen investeren. Het gaat al met al om enorme bedragen en onze volgende uitdaging ligt erin om de binnenvaartsector een prominente plek te laten krijgen in zoveel mogelijk onderzoeksvragen, zodat onze sector aanspraak kan maken op deze middelen."

We zijn nu samenkomen voor de STEERER slotbijeenkomst kan dat doen via www.linkedin.com/company/steerer

Bureau Voorlichting Binnenvaart · EICB · Bureau Telematica Binnenvaart

Figure 27 STEERER article in Scheepvarkrant

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No.875285

2.5 Digital campaign towards wider society

It had been one of STEERER's objectives to raise awareness of the waterborne transport sector and its commitment to become a fully sustainable zero-emission mode of transport. One of the STEERER target audience - the citizens - often have a lack of knowledge and/or a negative image regarding waterborne transport and its impact on the environment.

To overcome such diversity of perspectives and make the wider society aware of the importance of investing in green shipping and its overall impact for the mitigation of climate change, the STEERER project had foreseen a digital campaign oriented towards the citizens.

In order to engage with the civil society, STEERER had created a dedicated online space on https://steerer.citizenlab.co/ where users had the opportunity to interact lively in a series of tailor-made projects consisting of collecting and sharing ideas on waterborne transport, voting for the most suitable solutions, and filling surveys to obtain feedback. This campaign was hosted on the CitizenLab platform.

The two main projects on the platform oriented towards general society are the Shipping Quiz, the first project on the platform and the Mapping Waterborne Frontrunners campaign.

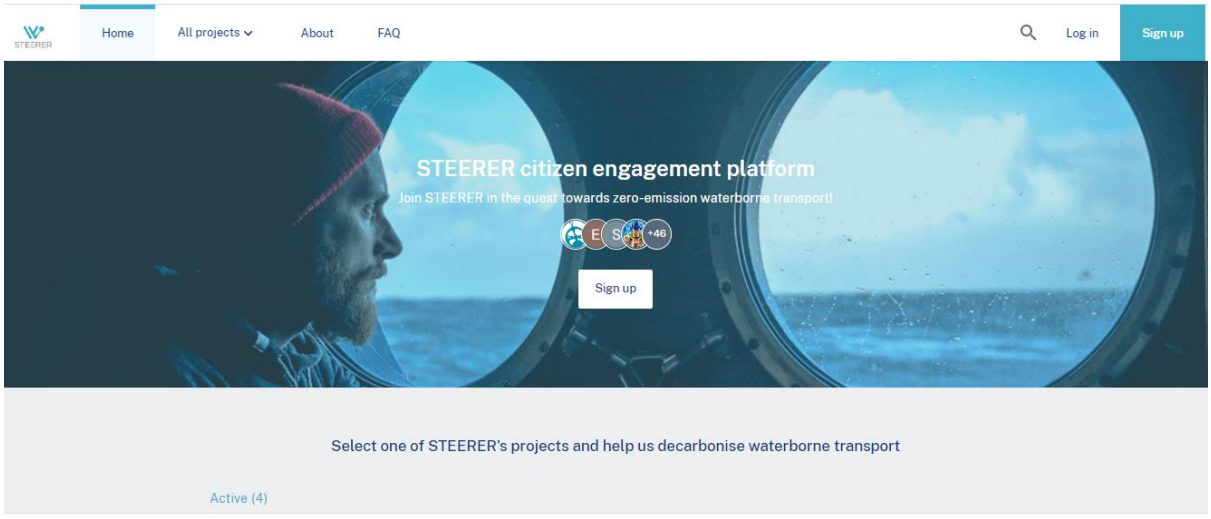

Figure 28 STEERER citizen engagement platform homepage on CitizenLab

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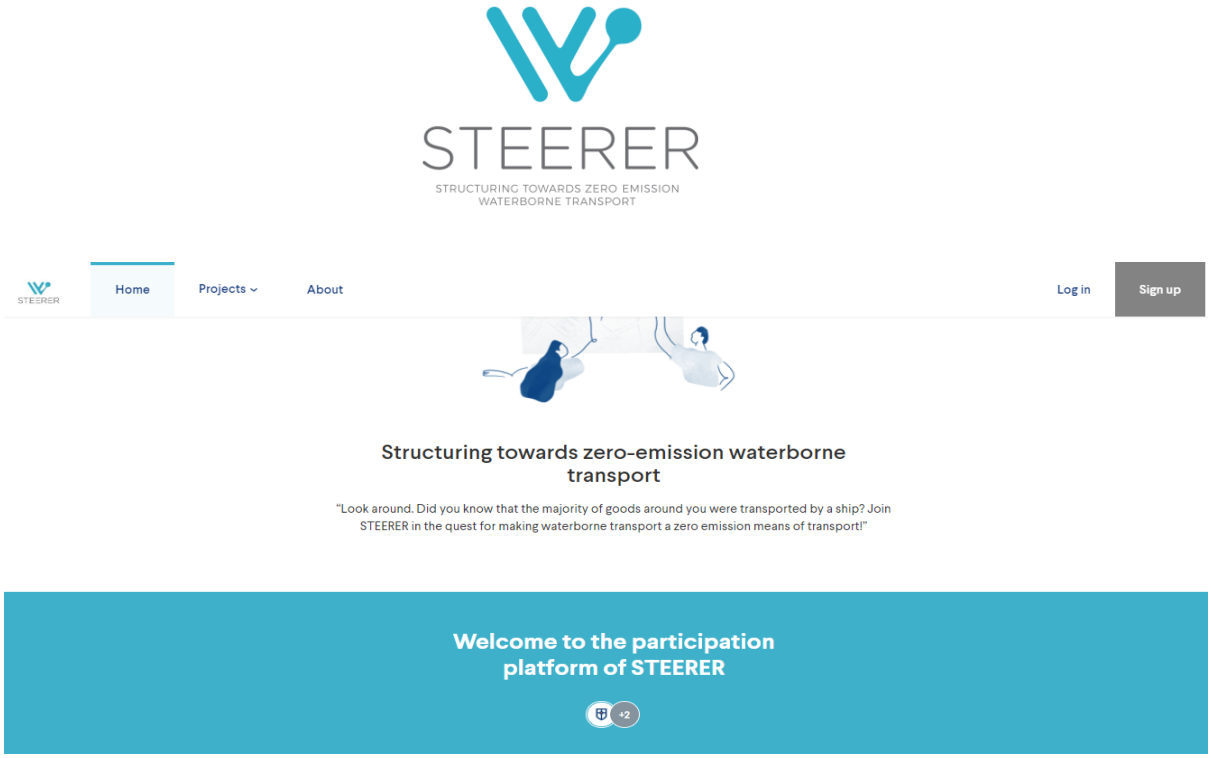

Figure 29 STEERER CitizenLab platform introduction page

Campaign I – Shipping quiz

The first campaign was especially targeted to a general public and regular citizens who might not necessarily be aware of the environmental implications and opportunities for this sector as well as its impact to our everyday lives.

The shipping quiz has been created in cooperation with the project consortium. The survey consisted of 15 simple yet important questions to test the knowledge about the shipping industry, using very practical day-to-day examples.

An example of a question included in the shipping quiz with correct answer and references.

The EU Shipping Industry has a major economic impact and it's a major employer. During 2018, how many people did the shipping industry directly employ?

a) 685,000

b) 50,000

c) 120,000

d) 800,000

Correct answer: A)

Reference: Oxford Economics - The Economic Value of EU Shipping

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The full list of questions is available in the Annex I.

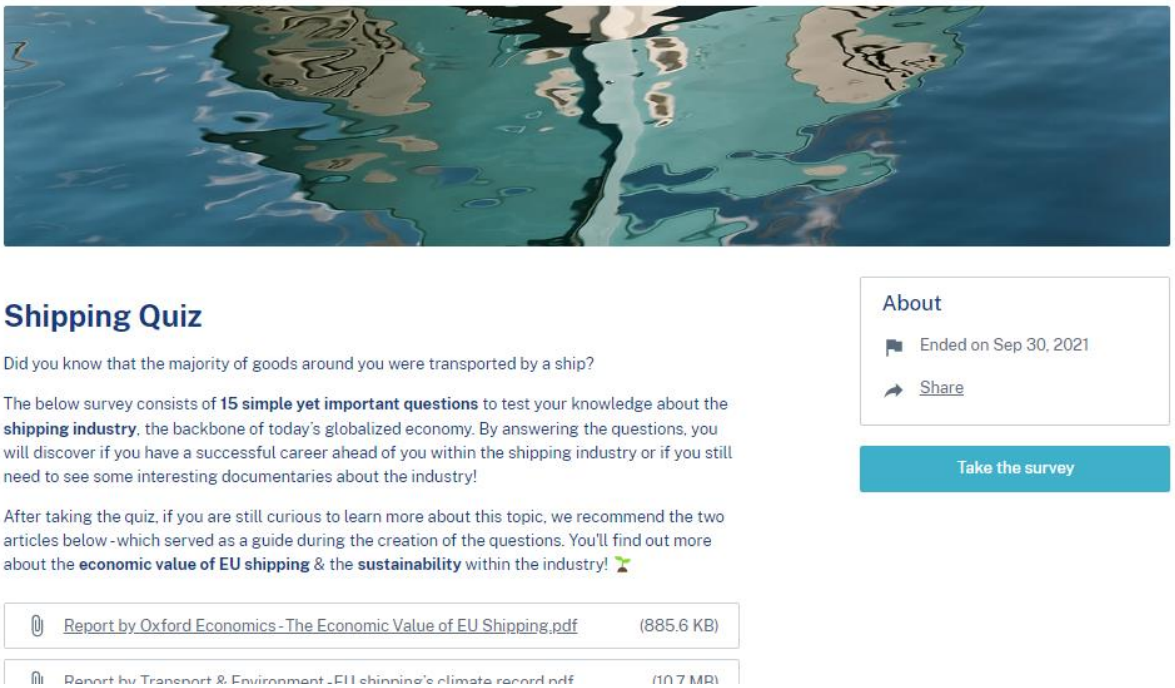

Figure 30 STEERER Shipping Quiz project page on CitizenLab

The questions in the shipping quiz have also been used to engage with stakeholders and audience on the social media. The questions have been shared as polls and received good interaction on LinkedIn.

Campaign II – Mapping waterborne frontrunners

The idea behind the "Mapping waterborne frontrunners" campaign had been to raise awareness of sustainable waterborne transport projects or initiatives already active in Europe. For this campaign, the STEERER Deliverable D2.1 State-of-Play of Decarbonisation of waterborne transport "technology application atlas" had been used to feed information from about the existing waterborne initiatives.

Accessing the project on the CitizenLab platform, the users had the opportunity to navigate the virtual map of Europe and discover past, ongoing and future waterborne projects, share their ideas or projects in their city or region related to waterborne and finally comment and vote for their favourite projects and initiatives.

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Mapping waterborne frontrunners

Are you aware of sustainable maritime related projects in your region?

For Europe, maritime transport has been a catalyst for economic development and prosperity throughout its history. Having in mind the significant role of this sector, below you can navigate in the map in order to:

- Discover past, ongoing and future waterborne projects
- Share your ideas or projects in your city / region related to waterborne
- Comment and vote for your favourite projects and initiatives

About

- Ended on Nov 30, 2022
- 30 participants
- 3 phases
- Share

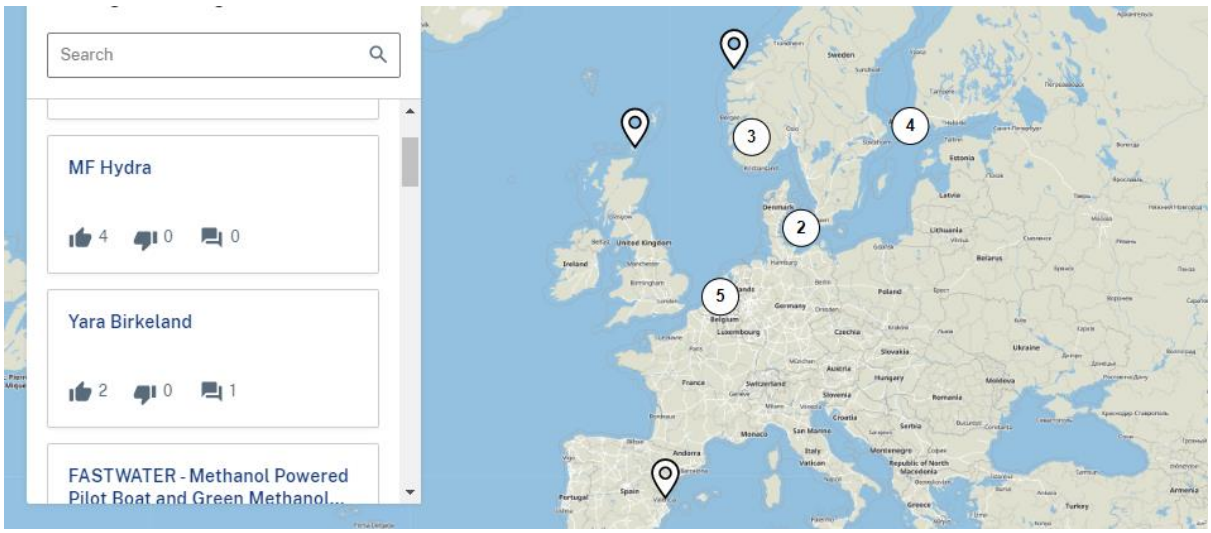

Figure 31 STEERER CitizenLab - Mapping waterborne frontrunners

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Statistics

The Table 3 below shows the statistics of the engagement of users towards different projects on the CitizenLab platform.

Project	Number of finalised task	Completion rate	Starts	Views	Time to complete
Shipping quiz	44	29.1%	151	3,404	21:51
Trends evaluation survey	40	25.3%	158	439	35:54
STEERER Scenarios on the future of the waterborne transport	47	32.9%	155	566	12:13
STEERER Statements	16	17.8%	90	180	26:35
Mapping Waterborne Frontrunners	30 participants	NA	NA	NA	NA

Table 3 STEERER CitizenLab projects statistics

The STEERER CitizenLab platform was a useful online interactive tool used directly by subscribed registered users. The content created on the platform had also been used as additional material for the STEERER social media including Twitter and LinkedIn.

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2.6 STEERER Ambassadors

In the beginning of the project, STEERER had set up the Green Shipping Expert Group (GSEG) consisting of representatives from relevant national and European initiatives, as well as of a number of frontrunners of the sector, combined with the organisations needed to get the broader sector (both ship-owners, operators, but also energy suppliers, shippers, ports, banks, classifications societies, competent authorities etc.). The full list of the GSEG members is available on the website.

The GSEG consisted of high-level waterborne transport stakeholders, with in-depth knowledge on the challenges the sector faces to decarbonise. These stakeholders are very reputable both within and outside the waterborne transport sector. Therefore, following their commitment to actively contribute to the project's results by partaking in the GSEG, a few of these experts have been invited to also become STEERER Ambassadors. In general, the STEERER ambassadors are professionals with a remarkable experience in the waterborne transport sector thus able to positively influence an audience who is not necessarily aware of the benefits brought by this transport mode. Throughout the duration of the project, the following high-level waterborne transport stakeholders including policy makers such MEP, have become STEERER Ambassadors and contributed to the project with video interviews:

Diane Gilpin, Smart Green Shipping
Jutta Paulus, Greens/EFA European Parliament
Antidia Citores, SURFRIDER
Santiago Suarez de la Fuente, University College London.
Caroline Nagtegaal - Renew Europe - EP
Guillaume Le Grand, TOWT
Stéphanie Lesage - Airseas
Marina Ferreira, Transtejo
Bernardete Goncalves Castro, Royal IHC
Sebastian Verhelst, Lund University

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The role played by the STEERER Ambassadors is twofold: 1. to communicate and disseminate the project and its results in their own networks; 2. to contribute to the production of C&D content. In particular, give interviews on the main challenges related to the path to zero-emission waterborne transport in the so-called *Ambassador videos*.

Ambassador videos

The STEERER Ambassador campaign had been launched in mid-2020 with the aim to show the strategic importance of waterborne transport using online media. The campaign had been launched during the COVID-19 outbreak which made it impossible to present STEERER at planned conferences and events which had been cancelled. The digital dissemination tool of the videos had been seen as a great alternative to out to stakeholders and the general public in that period.

In each video, the chosen Ambassador is asked to explain in a less than 1 minute why is waterborne transport so important, coming from their sector's perspective.

One of the first videos had been recorded with Jutta Paulus, Greens / EFA European Parliament who highlighted the current climate change issue like draughts and the opportunity for zero emissions vessels using alternative fuels to fight these issues (Figure 26).

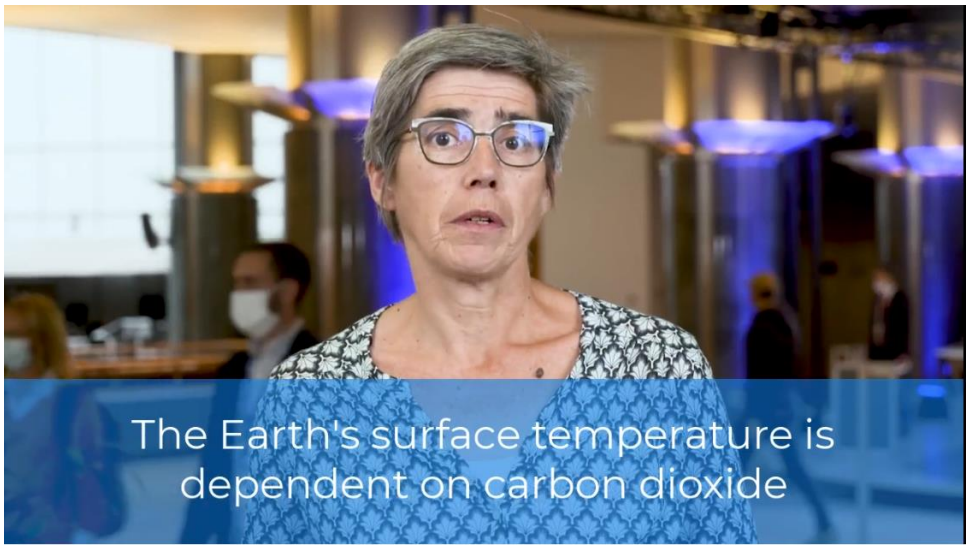

Figure 32 Jutta Paulus, Greens/EFA European Parliament

In the last STEERER ambassador video series, we had asked two waterborne experts from different stakeholder categories how to best achieve the zero emissions goal for the waterborne transport sector. In our first video of this kind, we matched Bernardete Goncalves Castro of Royal IHC

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representing industry and Sebastian Verhelst from Lund University representing academia. Our question has been: *What is from your perspective the required contribution from academia to help the greening of shipping?*. The full video is available here.

Figure 33 Sebastian Verhelst, Lund University

All the Ambassador Videos are made available on the Magellan Youtube channel in the STEERER playlist. In conclusions, involving ambassadors in the STEERER project revealed to be quite successful and certainly paved the way for continuing exploiting this concept in future EU funding activities.

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3. Communication & Dissemination Activities

3.1 Events, conferences & outreach

STEERER recognised the importance of the participation in high-level national and international events and conferences, with significant visibility for the project's target groups, considering it one of the main cornerstones of its communication and dissemination strategy. Targeted national/international events and conferences will be attended using innovative ways, including video and digital media, to communicate the results of the project at these events.

The partners had attended and presented STEERER at relevant and high-profile conferences and networking events (national and international) to directly communicate with the key target groups. This has facilitated the promotion, exchange of ideas, and feedback collection.

The initial list of potential events where to present STEERER was pretty exhaustive, however due to COVID-19 outbreak many of the planned events have been cancelled and the participation to external events has drastically reduced. The next pages include more information on the main events where STEERER participated since the project beginning.

19th European Week of Regions and Cities

STEERER organised an online session as part of the 19th European Week of Regions and Cities entitled "Engaging citizens to decarbonise waterborne transport" on Tuesday 12 October 2020. The session was 1 hour long and discussed the STEERER's journey to raising awareness about the often neglected transport mode in climate campaigns - waterborne transport - and its quest to become fully sustainable.

The main premise of the session was the communicating about waterborne transport and the two challenges it presents: firstly, the waterborne transport sector is highly fragmented, and opinions about the ways to achieve zero-emission waterborne transport differ. Secondly, the wider society has a lack of knowledge and a negative image regarding waterborne transport and its impact on the environment.

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The European Week of Regions and Cities (#EURegionsWeek) is the biggest annual Brussels-based event dedicated to cohesion policy and in 2021 it took place between 10-14 October, virtually. The STEERER session was attended by 40 participants.

Figure 34 STEERER at 19th European Week of Regions and Cities banner

Maritime Industry Fair 2022

STEERER partner EICB (EICB: Expertise and Innovation Centre for Inland Waterway Transport) has been part of the Maritime Industry Fair from 17 to 19 May 2022 in Gorinchem, the Netherlands.

EICB promoted the STEERER project at their booth where visitors also had the opportunity to get information about STEERER in the brand-new leaflet. In addition to the stand, EICB also led good discussions about the zero-emissions and greening of the inland waterways sector at the sessions.

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Figure 35 STEERER partners EICB at the Maritime Industry Fair 2022

Transport Research Arena 2022

Held on 14-17 November 2022 in Lisbon, Portugal, the TRA2022 gathered more than 2000 participants during the course of four days. The conference focused on four main themes including Smart Solutions and Society, Green Mobility and Decarbonisation, Innovative Infrastructures for Europe 2030 and Policies and Economics for a Competitive Europe.

In the company of other Horizon2020 Waterborne transport projects, STEERER had been part of the Waterborne TP umbrella stand, where visitors had the opportunity to meet some of the STEERER partners and find out more about the project and its next steps.

The importance of the waterborne transport mode was also highlighted during several plenary sessions including speeches and discussions involving Charlotte Huebner, Director ESG Public and Regulatory Affairs at Maersk and Eero Lehtovaara, Chair at the Waterborne Technology Platform.

TRA is the foremost European transport event that covers all transport modes and all aspects of mobility. In 2022, TRA was themed “Moving together – reimagining mobility worldwide”.

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Figure 36 STEERER at Waterborne stand at TRA2022

3.2 STEERER Mid-term and final conference

In addition to its participation in external events, STEERER had organised two project high-level conferences and 4 Green Shipping Expert Group meetings that will be described in chapter 4.

Mid-term conference

On 7 February 2022 together with the European Climate, Infrastructure and Environment Executive Agency (CINEA) and the Directorate-General for Research and Innovation (DG RTD), STEERER organised the workshop "Horizon 2020 Research and Innovation delivering smart, green, safe and competitive waterborne transport". The workshop counted 20 speakers including high level keynotes and more than 300 participants attending the event online and in person in Brussels.

The aim of the workshop was to present the results of seven years of investments in research and innovation towards smart, green and integrated waterborne transport, which took place in the framework of Horizon 2020. The event also provided an outlook to the future in the light of the new Horizon Europe programme.

The workshop included three panels on three topics: the transformation towards zero-emission waterborne transport; competitive, connected and automated waterborne transport; and safe and secure waterborne transport, with presentations and discussions from the representatives of

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Horizon 2020 projects, the European Commission, Member States and the waterborne transport sector.

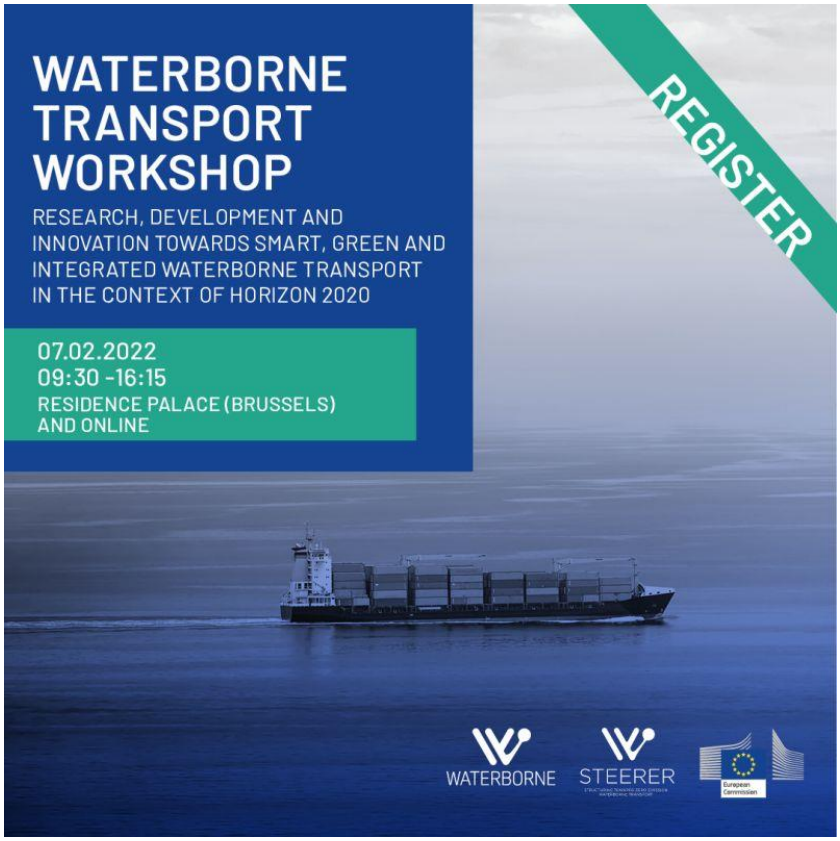

Figure 37 Waterborne Transport Workshop banner

The workshop was moderated by STEERER GSEG member and Ambassador Diane Gilpin and included key note presentations by Dirk Beckers (Director, CINEA), Rosalinde van der Vlies (Director, Clean Planet Directorate European Commission), Magda Kopczynska (Director, Waterborne Transport Directorate European Commission), and Asa Burman (Board Vice-Chair Waterborne Technology Platform).

The conference has been fully streamed and recorded. The recordings are divided in three parts and available for watching on Youtube:

Part 1 I Keynote Speeches and Transition Towards Zero Emission Waterborne Transport

Part 2 I Competitive, Connected and Automated Waterborne Transport

Part 3 I Safe and Secure Waterborne Transport and Closing

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The final agenda of the conference is available here, while all the presentations of the conference are also available here.

In addition to the organisation, STEERER also produced a CINEA's Horizon2020 brochure and an animation video for the conference highlighting some of more than 56 successful projects.

Figure 38 STEERER Mid-term conference with CINEA

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Figure 39 STEERER Mid-term conference at CINEA lobby

A press release had also been produced by Waterborne TP in the light of the conference, highlighting the key results of 7 years of investments in Research, Development and Innovation in the framework of Horizon 2020.

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STEERER WATERBORNE

Waterborne transport sector presents innovative solutions to the benefit of future generations

During a waterborne transport workshop organised on 07 February 2022, the European waterborne transport sector presented the key results of 7 years of investments in Research, Development and Innovation in the framework of Horizon 2020

Brussels, 07 February 2022

Almost 90% of everything around us is moved by waterborne transport and the European waterborne transport sector is responsible for approximately 4.2 million direct jobs in the EU. The European Union, being well aware of the sector's strategic importance, has been investing in Research, Development and Innovation towards smart, green and integrated waterborne transport in the framework of the Horizon 2020 programme. During the programme period 2014 - 2020, the European Commission has helped improve waterborne transport through more than 70 Horizon 2020 projects in three main areas: the transition towards zero-emission waterborne transport; competitive, connected and automated as well as safe and secure waterborne transport. The key results of a number of projects, as well as concrete examples of deployment of the innovative solutions developed, have been presented during the workshop. In addition, various European Commission Services have provided a future outlook of policy and regulatory efforts. Finally, the European waterborne transport sector has re-emphasized its commitment, including a significant amount of investments foreseen, to jointly deliver solutions to the benefit of future generations.

Dirk Beckers, Director of the European Climate, Infrastructure and Environment Executive Agency (CINEA) said: *"The project results presented today testify to the joint efforts made by the European Union and the European waterborne transport sector in developing concrete solutions for carbon-neutral, zero-accidents, automated and competitive waterborne transport. Over the past seven years, these projects have significantly contributed to the research, development and innovation capacity of the sector, with many results already deployed. A number of solutions have been demonstrated on board vessels, thus clearly showing technological readiness. Together with the waterborne transport sector, CINEA will continue to play a key role in further stimulating deployment by supporting first movers and by fostering synergies with other EU funding programmes".*

Rosalinde van der Vlies, Director Clean Planet, DG RTD of the European Commission said: *"With the objectives laid down in the European Green Deal, and specifically the objective to cut emissions by 55% by 2030, we have significantly increased the investments in research, development and innovation in the framework of Horizon Europe to accelerate the transition towards a zero-emission waterborne transport sector. The European Union has a unique waterborne transport sector, which is committed to develop and demonstrate disruptive solutions to eliminate CO2 emissions, and water pollution. A coordinated and joined up approach on research, innovation and deployment is needed to maintain and reinforce Europe's global leadership in innovative, and green transport solutions"*

Asa Burman, Vice-chair of the Board of Directors, Waterborne TP, concluded: *there is an ever increasing commitment towards realising solutions to continuously improve the footprint of our sector. The projects co-funded in the framework of Horizon 2020, have been essential to make the next steps regarding any transition. In addition, it facilitated the European waterborne transport sector to jointly work on a vision and mission towards 2050, which resulted in the Co-Programmed Partnership on Zero-*

Figure 40 Press release: STEERER and CINEA Workshop

Final Conference

The closing event of STEERER had been designed with the aim to propose and disseminate a comprehensive RD&I decarbonization strategy for the waterborne transport stakeholders, which will lead to a more harmonized innovation landscape that builds upon the insights and efforts of each organization, thus creating a whole that's larger than its individual stakeholders.

The final event "Future Exploration of Waterborne Transport" was organised on 12th October 2022 at the Beacon Innovation Center in Antwerp, Belgium. The event organisation was led by partners Waterborne TP, Royal Belgian Shipowners Association and Magellan Association with the support of all consortium.

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The event was imagined as an out-of-the-box setup aimed to bring life to ideas on how to tackle the climate challenges with a hands-on interactive event. The event brought together more than 90 participants of different backgrounds and expertise but always related to waterborne transport. After the morning inspiration session and introduction, the participants were split in nine teams with the goal to develop a prototyping canvas. During the morning inspiration session the moderators presented 'What if?'-scenarios and with the audience explored future oriented innovation-boulevards with an opportunities mindset and showcase innovations happening right now to realize these futures might not be that far away.

After the introduction session, the participants were divided in break-out groups of ±10 people where each group explored a different future-scenario from their own expertise, field of industry and insights. Starting from the far future and reverse-engineering to today via assumption busting and 'how might we?' questions, each table was led by its own facilitator to push ideas further and capture all ideas in insights. Keeping in mind the criteria, the groups were challenged to create a prototype canvas of a zero-emissions waterborne solutions of the future. A team of illustrators helped them translate their ideas from paper to canvases which presented to all the teams in the afternoon.

The teams brainstormed on ideas based on our childhood dreams but also kept in mind the critical uncertainties of such realisations. Fiction structures like independent ocean stations, cargo that floats on water instead of ships, flying poseydon kite vessel that transports cargo, modular vessels, are just some of the ideas the nine teams pitched after the return from the technical visits.

At the same time the illustrators have been working on the drawings, the teams attended the 4 organised technical sites by different demonstrators of zero-emissions solutions in Antwerp: Deme offshore simulator; the 1st hydrogen refuelling station and vessel Hydroville; FAST by Euronav; Seafar.

When all the teams returned, they presented their canvases and the ideas behind them to the other teams and other participants. The winning team C-HIVE (C for cargo, hive for beehive) whose idea of intermodal autonomous container that moves independently of a ship won the highest votes.

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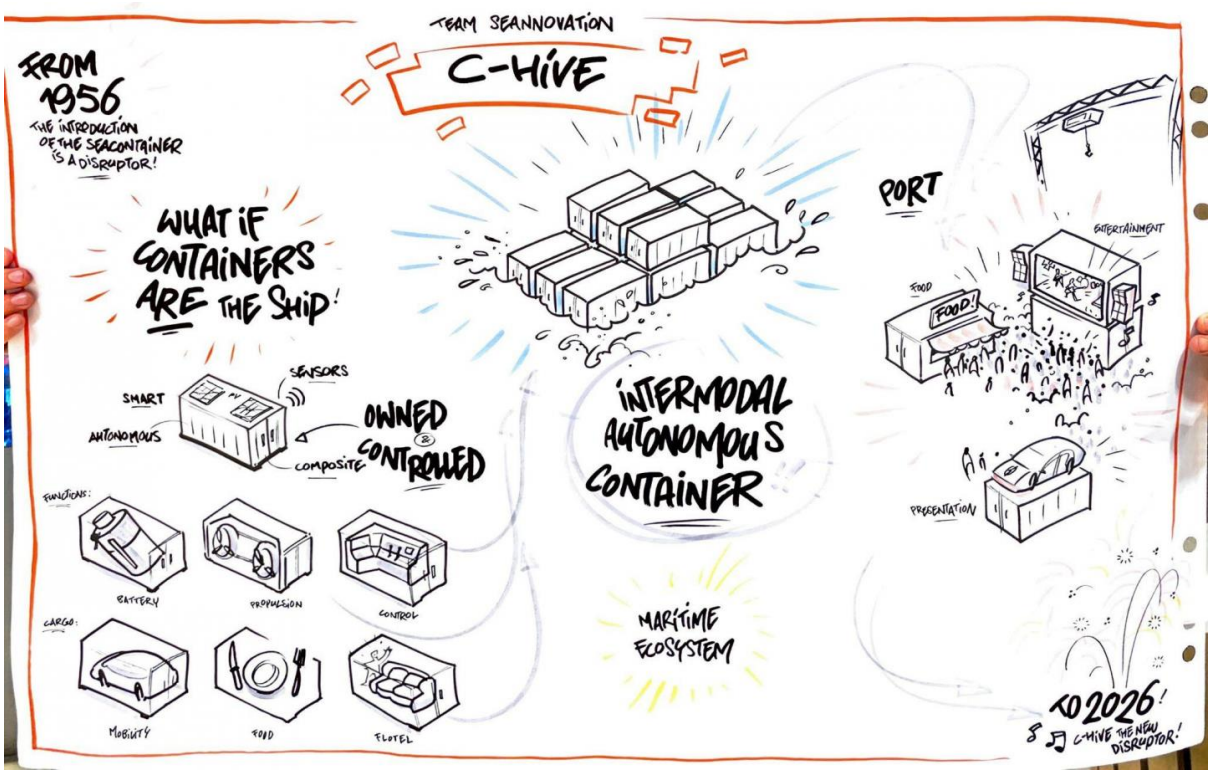

Figure 41 STEERER Final Event - Winning Canvas C-HIVE

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Figure 42 STEERER final event - morning session

Images of other canvases and master slides of the morning presentation are available on the STEERER website.

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4. The STEERER Advice for the ZEWT Partnership

The main scope of the project had been to provide support to the update and implementation of the ZEWT Partnership SRIA along the following three main directions:

- Advising on the update of the Partnership SRIA, both for its immediate actions and on the longer term (until the end of the Partnership. The second and final version of the STEERER advice is encompassed in the public deliverable *D2.7 STEERER Advice to 2nd ZEWT Research Agenda and its Implementation Plan*;
- A set of non-technical recommendations – policy, regulations, incentives & taxation, business models, etc. – that are complementary to the Partnership SRIA advice. The role of these recommendations is to help boost the RD&I, deployment and market uptake activities that will ensure the fully-fledged implementation of the Partnership results and, more importantly, help speed the decarbonization of the waterborne transport sector. These measures are outlined in the public deliverable *D2.4 Public policy instruments and interventions and other appropriate mechanisms, incentives and business models to increase the take-up and deployment from R&I activities arising from the ZEWT candidate Partnership,* whose 'policy' version is the public deliverable *D4.4 Policy Recommendations*;
- A monitoring framework for the implementation of the main recommendations from the previous two deliverables. This will ensure a souple and clear system to follow the proposed activities and to ensure that as many of them as possible are either implemented in the framework of the Partnership (mostly the technical ones) or are supported in various fora by the Partnership members (the policy and other non-technical recommendations). The STEERER monitoring framework is detailed in the public deliverable *D2.6 Monitoring and evaluation arrangements from the ZEWT SRIA agenda and its implementation*.

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4.1 The STEERER Advice on the Partnership's SRIA

The intermediate input for the SRIA from WP2 had already been discussed with members of the Waterborne Technology Platform as well as DG RESEARCH during the project's lifetime. These draft results had been used as input for preparing the ZEWT Partnership calls that had been published in Horizon Europe Working Programme 2023-2024 cluster 5 e.

In the final project deliverable, D2.7, is publicly available via the WaterborneTP/STEERER website and comprises three main aspects that will be used by the Partnership in the coming years..

The first output concerns the carbon budget available for the waterborne transport and how the waterborne transport sector can avoid depleting it. Scientist had calculated that there is a certain amount of CO2 that can be emitted into the atmosphere until the Globe reached the 1,5°C warming threshold, which is seen as a major tipping point. The waterborne transport sector's emissions had been calculated by the IMO as being 2,89% of the total emissions. Consequently, the share of the waterborne transport sector from the total remaining carbon budget is 8970 Million tonnes (Mt) CO2, with yearly emissions of 1056 MtCO2/y. Consequently, the STERRER calculations have shown that the sector will deplete its carbon budget in about 7-8 years if the emissions continue at the same level.

It is against this backdrop that the project had designed the technical and non-technical recommendations in the key deliverables mentioned above, including the calculation of the FF55 impact on the emissions' reductions and the fact that these will still not be sufficient. It must be noted that this information had already been shared in IMO-related discussions (with member-states), and the STEERER partners will continue to do so in the coming period.

Secondly, the deliverable outlines **numerous recommendations for each of the six intervention areas** through which the SRIA tackles the sector decarbonisation – sustainable alternative fuels (SAFs), electrification, energy efficiency, design & retrofitting, digital green, ports. These recommendations cover mostly technical aspects, but regulatory and business ones as well, while at the same time taking into account their applicability on the six main ship types defined in the SRIA: long distance ships, short sea ships, cruise ships, ferries, inland waterways and off-shore ships. Based on the discussion with the project advisory body, the GSEG, a significant part of these recommendations also indicated the funding mechanism(s) for which they are most suitable; in most cases the focus is on either the HEU or the Innovation Fund.

These recommendations had been designed considering the aforementioned carbon budget and decarbonisation targets per ship type. With this work, the STEERER partners had sought to identify and propose some of the best measures to decarbonize the sector as soon as possible, considering the available funding mechanisms and in particular the ZEWT Partnership.

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Part of these recommendations had already been considered in the 2023-2024 ZEWT Calls in the framework of the HEU, and all of them will be used by WaterborneTP and its members for the following actions that are also to be considered as STEERER exploitation activities:

1. **designing the ZEWT 2025-2027 calls** to ensure the Partnership targets and thus the decarbonization of the waterborne transport sector by 2050;
2. these recommendations will be considered by the **WaterborneTP members in developing their Additional Activities Plan** – a key element in the Partnership's monitoring system – which are meant to either continue the technologies funded by the Partnership, or develop complementary ones;
3. given the reinforced cooperation established with the Clean Hydrogen JU and BATT4EU, WaterborneTP could also **include some of these recommendations in the discussions with the two partnerships**, potentially resulting in some other relevant HEU calls;
4. some of the **regulatory or business recommendations had also been integrated** in the D2.4 and D2.6 measures and will be followed by the Partnership members, as described in the pages below;
5. the members of the **STEERER Network that are not WaterborneTP members will also be incentivized to support and/or implement these measures** via their own organizations, given their foreseen close cooperation with WaterborneTP and the Partnership;
6. the recommendations **will be promoted by WaterborneTP and its members to the wider waterborne transport sector**, either directly or via the activities of some projects, the most important being at this moment:
    a. PLATINA3, a CSA designed to help implement the NAIADES III programme and that is related to STEERER and the Partnership in terms of RD&I topics for the IWT;
    b. LASTING, a communications-oriented CSA designed to widen and increase the involvement of the waterborne transport stakeholders in RD&I activities;
    c. NEEDS, a CSA issued in the Partnership framework which will continue part of the STEERER work (on the sustainable alternative fuels).
7. finally, **the deliverable containing the recommendations is publicly available and will be promoted** via the aforementioned activities, therefore all interested waterborne transport stakeholders can use this information in planning their RD&I investments and thus contribute outside the official Partnership and STEERER frameworks to the greening of waterborne transport;

A third key output from D2.7 is **an analysis of EU-funded RD&I projects from the sector**, in particular those funded under H2020 and the Innovation Fund. The scope here had been two-fold:

- **identify and build upon, where possible, the relevant results of previously awarded projects**. This can be done either through future Partnership calls, the Innovation Fund calls or the stakeholders' own activities (e.g. the AAP);
- **avoid the duplication of efforts** between past and current/future RD&I activities, since the Partnership cannot cover or redo all topics, and the time available is limited.

The analysis had helped identify valuable inputs subsumed to the two points mentioned above, but it had also shown some gaps in terms of relevant topics not covered by the previous projects. All these conclusions will be taken up by the internal WaterborneTP working groups and will be

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further developed and refined, to better identify which technologies should receive priority either through the ZEWT calls or through the members' AAPs. Moreover, the public information can also be used by non-Partnership/non-WaterborneTP members to avoid any duplications and/or to better plan and design their RD&I activities for the next years.

Lastly, deliverable D2.7 had also investigated two other relevant aspects:

- identifying and analysing the state-of-play in terms of policies (status: November 2022) and their foreseen developments. This had been done to ensure the correct overview of the policy (and legal) requirements that the sector will need to implement and respect, since the RD&I activities planned by the Partnership must be both compliant with the policy targets and contribute to their achievement. The analysis had contributed to the recommendations on the SRIA intervention areas mentioned above, as well as to the D2.4 and D2.5 deliverables, as described below;
- the update of the more general Waterborne transport data – e.g. stats on economics, regulatory aspects, etc. – that is presented in the Partnership. While this exercise is not part of the key updates, it is nevertheless important since it helps realign the general framework and context of the Partnership. Moreover, such data is also helping the Partnership members understand the general evolution of the sector, which is also contributing to the choices made for the 2025-2027 calls.

4.2 Policy, Regulatory, Business and other STEERER Advice

Complementary to the technical advice encompassed in D2.7 and outlined in the subchapter above, STEERER had also provided a set of non-technical recommendations whose implementation will ensure the faster and easier development and deployment of the new technologies that will green the waterborne transport sector. These are comprised in deliverable *D2.4 Public policy instruments and interventions and other appropriate mechanisms, incentives and business models to increase the take-up and deployment from R&I activities arising from the ZEWT candidate Partnership*, whose 'policy' version is deliverable *D4.4 Policy Recommendations*. Both deliverables are publicly available on the WaterborneTP/STEERER website.

The recommendations proposed concern both overarching aspects for the waterborne transport sector and applied measures for each of the intervention areas defined in the SRIA. In the case of the latter, they are further divided into two categories:

- technical and operational policy recommendations;
- economic and business-oriented activities and examples.

In terms of exploitation, the main activity will be for the STEERER members to promote in the future these ideas and recommendations, through different channels and various fora, at both national and EU/international levels.

A second aspect is the inclusion of the technical and operational advice in the scope of the future HEU, Innovation Fund or other projects that the STEERER partners and their members or collaborators will work on (e;g. safety aspects in the development and deployment of SAFs or

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electrification). In this context, the Partnership members will also take into account of these aspects when developing the draft calls for 2025-2027

The public availability of both deliverables will also allow any other waterborne transport stakeholders to effectively join the efforts and contribute to achieving some of the proposals mentioned there.

4.3 STEERER Monitoring Framework for the Partnership's SRIA

In addition to providing detailed advice for technical and non-technical aspects in relation to the Partnership's SRIA, and to RD&I in general, STEERER had also designed a comprehensive yet easy-to-use monitoring framework, in order to ensure that there will be a follow-up on the proposed actions.

The monitoring framework is comprised of two parts, each encompassing the recommendations from D2.4 and D2.7 respectively. For both sections, the STEERER partners had chosen to focus on a smaller list of actions, namely those that are deemed to have a higher impact in relation to the Partnership and the decarbonisation goals.

Each recommendation has its short and easy to use monitoring methodology, which in most cases includes clear, specific, measurable and Partnership-related criteria, such as:

- applicable/preferred funding mechanism for further development – in general HEU or the Innovation Fund – including the existence of demonstrations (and how many);
- pertinence to a SRIA intervention area;
- type(s) of ship(s) targeted by this action;
- number of (main) technologies developed and/or tested;
- reference to the Partnership's KPIs (though they are not mentioned as such in the monitoring);
- etc.

The monitoring framework is addressed first of all to the ZEWT Partnership and, by extension, to WaterborneTP. The WaterbonreTP internal groups are foreseen to use this monitoring framework as part of their work to prepare the next ZEWT calls and to assess the RD&I developments of the Partnership in particular, and those of the entire waterborne transport sector in general. It will thus act for WaterborneTP and its members both as a review tool and as a reminder to follow-up on the major technical and non-technical issues identified by the STEERER project, including those that cannot be addressed through the Partnership, but via other means.

However, since it is also publicly available on the WaterborneTP /STEERER website, the information can be easily picked, adapted and used by other stakeholders or initiatives for their own RD&I planning.

Finally, it must be noted that the proposed monitoring framework from STEERER can also be considered as complementary to the monitoring framework established by the EC for the co-

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programmed partnerships at the HEU level. The STEERER monitoring framework has sought not to duplicate the work, but to work on the key aspects developed within the project which at the same time are also linked to some of the monitoring categories and requirements from the EC framework

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5. The Green Shipping Expert Group

The **Green Shipping Expert Group (GSEG)** is on the one hand, one of STEERER's main results, and, on the other, privileged contributors to the creation, communication and dissemination of STEERER's messages. The GSEG had formed the core consultation body of the project and had provided recommendations to the STEERER project and, by extension, to the ZEWT Partnership SRIA regarding the pathways towards zero-emission waterborne transport, in terms of defining R&I priorities, necessary accompanying policies and regulations, as well as investment priorities. Thereby, the members of the GSEG had helped pave the way towards zero-emission Waterborne Transport for Europe. The group consisted of a limited number of key stakeholders representing a well-balanced mix of different sectors of the broader waterborne transport sector.

The Green Shipping Expert Group had been formed in October 2020 with 40 experts selected out of more than 80 applications received from high-profile professionals across Europe. The full list of members is available in Table 4 below, while biographies and photos of all the members of the GSEG and the Scientific Committee have been published on the STEERER website. The role the GSEG members played in the communication and dissemination of the project is further detailed in Section 2.6 STEERER Ambassadors.

Diane Gilpin	Smart Green Shipping
Poul Woodall	DFDS
Salvador Furió	Fundación Valenciaport
Sebastiaan Bleuanus	Wärtsilä
Ian Sharp	Fuels Europe
Hege Okland	NCE Maritime Cleantech
Turi Fiorito	European Federation of Inland Ports
Blandine Vicard	Bureau Veritas Marine & Offshore
Benjamin Boyer	Central Commission for the Navigation of the Rhine
Reddy Devalapalli	Lloyd's Register
Hans Anton Tvete	DNV GL
Gunther Jägers	Chemgas Shipping B.V.
Erik van der Blom	Royal IHC
Wolfram Guntermann	Hapag-Lloyd
Maria Boile	CERTH
Manfred Seitz	Danube Commission
Sandro Vidas	Croatian Shipowners' Association

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Dorte Kubel	MAN Energy Solutions
Marco Schembri	ECMAR
Asa Burman	Lighthouse
Ketil Olaf Paulsen	Kongsberg Maritime
Mario Dogliani	Fondazione CS MARE
Joanne Ellis	SSPA Sweden
Selma Ergin	Istanbul Technical University
Dirk Degroote	European Tugowners Association / Cognaushiip
Gregorz Pawelec	Hydrogen Europe
Lennart Swoboda	Bernard Schulte
Wassim Daoud	Ponant
Alessandro Iafrati	National Research Council/Institute of Marine engineering ?
Gavin Allwright	International Windship Association
Joghum Bruinsma	Nedstack Fuel Cell Technology
Karin de Schepper	Inland Navigation Europe
M. Hossein Ghaemi	Gdansk University of Technology
Juan Manuel Fernandez Suarez	Porteco
Fanny Lossy	European Community Shipowners' Association
Antidia Citores	Surfrider Foundation Europe
Pieter Huyskens	Damen Shipyards
Isabelle Ryckbost	European Sea Ports Organisation
Philip Easthill	European Boating Industry
Benjamin Friedhoff	Development Centre for Ship Technology and Transport Systems
Richard Bucknall	University College London
Guillaume le Grand	SAS Transoceanic Wind Transport
Saimon Conti	CNT Technologies
Sander den Heijer	Netherlands Maritime Technology
Romain Gibon	Airseas
Elio Ruggeri	Gas Infrastructure Europe
Faig Abbasov	Transport & Environment
Ioannis Andrepoulos	Union of Greek Shipowners
Philippe Sergent	CEREMA

Table 4 Green Shipping Expert Group Members

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The group had been tasked with reviewing and commenting documents, participating to the strategy evaluation meetings and contributing by presenting (when requested) pre-competitive developments regarding zero-emission transport at the level of their organisation. A total of four meetings had been organised during the project's lifetime and their outcomes are described in the Deliverables: D3.3 Results of the first consultation phase: Trends and drivers for change, D3.4 Results of the Second Consultation Phase: Scenarios and Targets 25-30-50, D3.5 Results of the Third Consultation Phase: Priorities & SWOT and D3.6 Results of the Fourth Consultation Phase: R&I Agenda & Implementation Plan.

The involvement of the experts had indeed helped with the definition of important milestones in STEERER's work, with particular reference to the definition of decarbonisation targets at until 2050 and per ship type, and priority actions within the six intervention areas of the Partnership's SRIA that will enable the achievement of the aforementioned decarbonisation targets. They also made a major contribution to the preparation of a set of recommendations for policies, financial mechanisms and other types of interventions to support the take-up of the research findings from the sector (ref. D2.6 Monitoring and evaluation arrangements from the ZEWT SRIA agenda and its implementation). The results of this collaboration are visible first and foremost in the Advices on the ZEWT Research Agenda and its Implementation Plan that were provided by the project.

The high participation of GSEG members over the years of the project, and their expressed willingness to continue with consultation activities in the future, demonstrate the strong interest in the topic of zero-emission waterborne transport by external stakeholders. They are also clear signs of appreciation to STEERER (and the Partnerships) for creating a unique consultation table where different visions, interests and needs in the sector could get together and discuss converging in the end in joint directions, and recommendations for the future.

Although the GSEG had been established in the framework of the project, its activities will continue under the name of the 'STEERER Network' after the project lifetime as a strong exploitable result. This time the STEERER network will first be a consultative body for Waterborne TP, called to mainly give advice to the ZEWT Partnership on upcoming SRIA updates and on other relevant topics for the Partnership. The experts can also be asked to contribute to other specific activities, such as entering the consultative bodies of another project related to it or stemming from the Partnership. This is already foreseen to happen as of 2023 in two projects:

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- PLATINA3, which looks at the implementation of the NAIADES III programme and is also linked to the STEERER project on a number of content-related aspects (mainly the decarbonisation of the IWT);
- The NEEDS project, which is a CSA issued in the framework of the ZEWT Partnership and will continue part of the work started by STEERER, with the focus on the future deployment of sustainable alternative fuels for the different waterborne transport segments in the different European regions.

The Terms of Reference (ToR) and rules of procedures for the expert group are defined by STEERER (ref. D3.7) and shared with the experts.

This experts' group represents a major legacy of STEERER and an important achievement for the entire waterborne stakeholder community as a guide in the green transition of the sector in the years to come.

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6. Final evaluation of C&D and exploitation activities

STEERER had deployed a multitude of communication and dissemination activities through specific, pre-identified C&D tools. The planned activities are accompanied by measurable results (KPIs – Key Performance Indicators), to monitor and assess their overall impact.

Figure 43 shows STEERERs Communication and Dissemination tools.

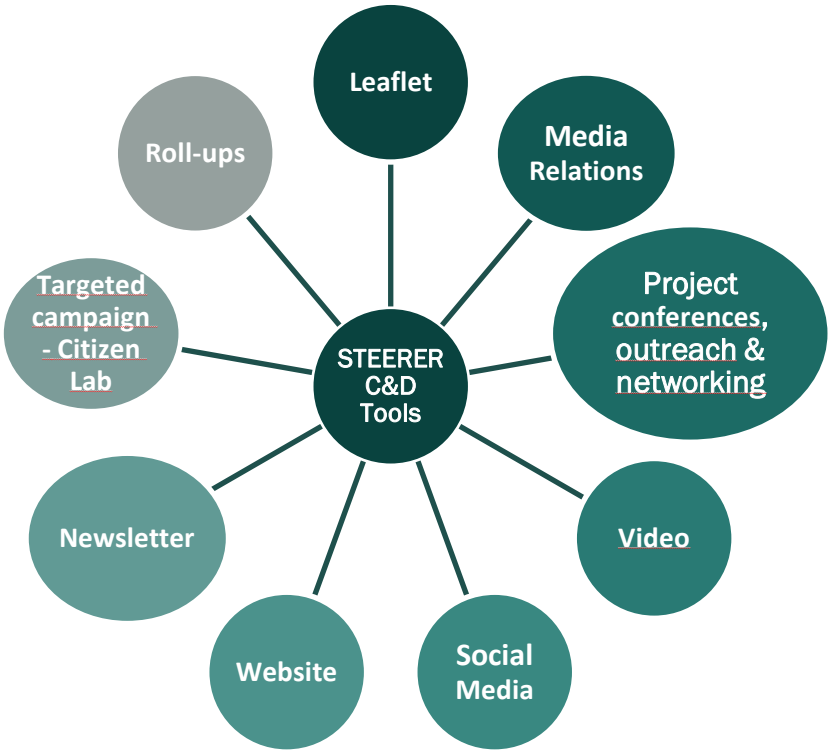

Figure 43: STEERER Communication and Dissemination Tools

Below, a table with STEERER's Communication and Dissemination Key Performance Indicators can be found, indicating the specific tools and corresponding KPI description and impact achieved. The activities at hand had been tailored to the project's communication and dissemination objectives and strategy, linking back to the overall work programme of the project. The Key Performance Indicators listed below are based on those consolidated in the D4.1 Updated Communication and Dissemination Plan. As it can be seen in the table, STEERER had in some cases exceeded while in

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others underperformed when it comes to the KPIs established. The reasoning for both situations can be elaborated in the following points:

1. **Number of printed materials:** Due to the COVID-19 outbreak in 2019 a significant number of conferences had been cancelled and moved to virtual events. The need to print 1000 copies of flyers was no longer logical and STEERER has focused on producing online materials such as Ambassador videos.
2. **Twitter targets:** The target of 700 followers on Twitter had not been reached as obliged in the strategy, however the target of LinkedIn followers has well been reached. The reasoning behind might be that more private persons like the stakeholder or general wider society use LinkedIn, rather than Twitter.
3. **Number of presentations in international conferences:** During the first year of STEERER project the majority of the conferences planned had been cancelled due to COVID-19 outbreak without being prepared for a virtual alternative.
4. **Number of videos produced:** Taking a more digital approach as a consequence of the COVID-19 outbreak, STEERER had created more videos than initially planned engaging the Ambassadors in the realisation.

C&D Tool	Key Performance Indicator description	Key Performance Indicator measurement	Actual performance achieved
Leaflet (1st version)	Number of leaflets printed	1000	TBC
Leaflet (2nd version)	Number of leaflets printed	1000	100 (reduced number of physical events due to COVID-19 outbreak
Roll-ups	Number of roll-ups produced	2	2
Website	Number of unique visits by the end of the project	3250	6,370 out of which unique 4,660
Social Media			
Twitter	Number of followers by the end of the project	700	279
	Number of links created with representative groups from across the EU by the end of the project	10	8
	Number of interactions generated, per month	10	+15
	Number of followers by the end of the project	700	740

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LinkedIn	Number of links created with representative groups from across the EU by the end of the project	10	10+
	Number of interactions generated, per month	10	30+
YouTube	Number of published videos	3	12
	Number of video views	1000	1170 Youtube views + direct views in person at events / on social media (at least the double)
Targeted campaign for wider Society	Number of people engaged via digital activation	1000	Same as above
Media Relations	Number of Press Releases	4	5 with Waterborne
	Number of news about the project published	40	29 website items + many more news on social media
	Number of full reports produced	2	N/A
	Number of summary reports produced	4	N/A
Project conferences, outreach & networking	Number of project high-level conferences	2	2
	Number of GSEG meetings	4	4
	Number of presentations in international conferences	10	6
	Number of stands in international conferences	3	3
	Number of visits to international conferences	5	7
Newsletter	Number of newsletters produced	3	8
Video	Number of video views across all platforms in which it will be shown/uploaded	800	Estimated 2000

Table 5: STEERER's Communication and Dissemination Key Performance Indicators and Results

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7. Conclusions

D4.3: Final Exploitation Plan is a further development of the D4.1 Updated communication and dissemination strategy written in the beginning of the project. The document clearly describes and reports all the communication and dissemination activities put in place throughout STEERER's implementation.

Going beyond the project's communication and dissemination, this document also looks at the achievements of STEERER, in particular:

- the work of the advisory body (the GSEG), as shown by the deliverables D3.3 – D3.6;
- the extensive RD&I advice given to the ZEWT Partnership for the updates of its SRIA, as shown by D2.5 and especially D2.7;
- the set of recommendations concerning policies, operational, business, etc. aspects which are meant to support the faster development and roll-out of the RD&I activities, so that the sector can comply with the current and foreseen climate-related targets, as presented via the D2.4 and D4.4 deliverables;
- the monitoring framework that will ensure the follow-up of the proposed technical and non-technical recommendations, as described in D2.6.

All the mentioned deliverables are publicly available on the WaterborneTP/STEERER webpage, for the benefit of both the waterborne transport stakeholders and the public at large.

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Annex I

Citizen Lab Campaign – Shipping Industry Questions

1. The EU can boast the world's youngest and most innovative fleet. Being home to the world's largest shipping fleet, do you know how much of the world tonnage the EU controls?

   a) 20%

   b) 30%

   c) 40%

   d) 50%

Correct answer: C).

Reference: European Citizen Science Association

2. The shipping industry is incredibly diverse, specialized and far less uniform than any other sector of the transport industry. If you look closely at the ocean, you'll see many different ships. Which of the following options are relevant ships to the industry?

   e) Container vessels.

   f) Bulk carriers.

   g) Tugs.

   h) Cruisers.

   i) Speedboats.

Correct answer: a) b) and c).

Reference: European Citizen Science Association

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3. Oceans, seas, inland waterways and lakes are an essential transport route for the global trade flows and as places for living and recreation. In a random room, how much of the items in it would not be there without shipping?

a) almost 90%

b) almost 80%

c) almost 70%

d) almost 60%

Correct answer: A).

Reference: https://www.waterborne.eu/projects/coordination-projects/steerer/about-steerer

4. Being the lifeblood of the global industry, the shipping industry aims to reduce its environmental impact. Progress was made at IMO (the International Maritime Organization) towards the ambition set out in its initial strategy on reduction of greenhouse gas emissions from ships. What strategies could be done in order to reduce greenhouse gas emissions from ships?

a) Ship energy efficiency.

b) Alternative fuels.

c) Development of national action plans to address greenhouse gas emissions from international shipping.

Answer: a) b) c).

Reference: Review of Maritime Transport in 2020.

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5. The EU has adopted a strategy that aims to transform the EU into a fair and prosperous society, with a modern, resource-efficient and competitive economy where there are no net emissions of greenhouse gases in 2050 and where economic growth is decoupled from resource use. What is the name of this strategy/ deal?

Answer: European Green Deal.

Reference: https://www.waterborne.eu/projects/coordination-projects/steerer/about-steerer

6. The EU Shipping Industry has a major economic impact and it's a major employer During 2018, how many people did the shipping industry directly employ?

a) 685,000

b) 50,000

c) 120,000

d) 800,000

Correct answer: A)

Reference: Oxford Economics - The Economic Value of EU Shipping

7. First developed in the early 1950s, container ships currently transport most consumer goods. Take a look at your household, for instance. You have items that are so embedded in your lifestyle that you probably tend to overlook how far away they have come from. You might have many goods from different countries that were brought to you by ships! Of the following options, what kind of products do inland waterway vessels carry?

a) Pharmaceutical products

b) Coal

c) Fresh fruit

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Correct answer: a) b) c).

Reference: EU Shipping Climate Record – Transport & Environment

https://www.bureauvoorlichtingbinnenvaart.nl/over/basiskennis/soorten-lading

8. According to United Nations Conference on Trade and Development (UNCTAD), transportation of containerised goods has…

a) been gradually decreasing.

b) more than tripled since 2000 and the trend is only growing.

c) doubled since 2000 and the trend is only growing.

d) been similar to 2000.

Correct answer: B)

Reference: EU Shipping Climate Record – Transport & Environment

9. In the post-COVID world, much focus will be directed at the 2030 Agenda adopted by all UN Member States in 2015. Can you name a few goals which are directly related to the role of sustainable shipping?

Correct Answers:

GOAL 6: Clean Water and Sanitation

GOAL 7: Affordable and Clean Energy

GOAL 8: Decent Work and Economic Growth

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GOAL 9: Industry, Innovation and Infrastructure

GOAL 11: Sustainable Cities and Communities

GOAL 13: Climate Action

GOAL 17: Partnerships to achieve the Goal

Reference: https://www.imo.org/en/MediaCentre/PressBriefings/Pages/31-World-Maritime-Day-2020.aspx

10. The European maritime also contributes to the development of a competitive and resource efficient transport system in the EU. Annually how many passengers embark and disembark at EU ports?

a) 100 million

b) 200 million

c) 400 million

d) 500 million

Correct answer: C)

Reference: https://ec.europa.eu/transport/modes/maritime/maritime-transport_en

11. According to the latest information from 2018, European shipping directly contributed to how much to the EU's GDP?

a) 54 billion

b) 30 billion

c) 23 billion

d) 10 billion

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Correct answer: C)

Reference: Oxford Economics - The Economic Value of EU Shipping

Questions from one of the partners:

12. If you are looking for a place to navigate, why not try the European inland waterway network? It comprises many kilometres of canals, rivers and lakes of which approximately 20,000 kilometres is concentrated primarily in the Netherlands, France, Germany, Belgium and Austria. Do you know how long is the European inland waterway network?a) Approximately 70.000 km long

b) Approximately 51.700 km long.

c) Approximately 40.200 km long

d) Approximately 85.600 km long

Correct answer: B).

Reference: https://www.bureauvoorlichtingbinnenvaart.nl/over/basiskennis/vaarwegen

13. Inland vessels can deliver freight anywhere in Europe, even into the remote hinterlands. Practically all large, important industrial areas in western Europe are accessible to inland shipping vessels. Do you have an idea of h ow many inland waterway vessels are there in Europe?

a) Approximately over 12,000.

b) Approximately over 16,000.

c) Approximately over 20,000.

d) Approximately over 25,000.

Correct answer: A).

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Reference: https://www.prominent-iwt.eu/wp-content/uploads/2015/06/2015_09_23_PROMINENT_D1.1-List-of-operational-profiles-and-fleet-families-V2.pdf

14. How much cargo can an inland waterway vessel carry?

a) The smallest inland cargo vessel can carry around 100 tonnes and the largest pushed convoys have a carrying capacity of up to 10,000 tonnes.

b) The smallest inland cargo vessel can carry around 250 tonnes and the largest pushed convoys have a carrying capacity of up to 12,500 tonnes.

c) The smallest inland cargo vessel can carry around 350 tonnes and the largest pushed convoys have a carrying capacity of up to 16,000 tonnes.

d) The smallest inland cargo vessel can carry around 500 tonnes and the largest pushed convoys have a carrying capacity of up to 24,000 tonnes.

Correct answer: C).

Reference: https://www.bureauvoorlichtingbinnenvaart.nl/vervoeren/logistieke-keten/mogelijkheden

15. A Tesla premium model car has a battery capacity of around 100kWh. A very large inland pushed convoy carrying coal between Rotterdam and Duisburg uses approximately 100 mWh of mechanical energy for the propulsion of one roundtrip. This equates to how many Tesla's?

a) 100

b) 500

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c) 1000

d) 2000

Correct answer: C).

16. A banana a day keeps the doctor away. That's right! One of the items that is mostly shipped and distributed by cargo ships around the world is bananas. Do you ever wonder how many bananas can t he largest container ship hold ? Let us help you: the number would be about one banana for every person in Europe and North America.

a) About 75 million.

b) About 134 million.

c) About 400 million.

d) About 746 million.

Correct answer: D). The largest container ship can carry 15,000 boxes, which would hold 746 million bananas.

Source: https://www.theatlantic.com/international/archive/2013/08/shipping-industry-bigger-you-can-imagine/312253/

17. Since the 19th century, ships have been using ballast water for safety, stability and thrust depending on the quantity of cargo being transported; as well as to compensate loss of fuel weight, water consumption, and to maintain structural stress at acceptable levels. These cargo vessels can carry enough ballast water to fill how many Olympic swimming pools?

a) Approximately 4,000.

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b) Approximately 2,000.

c) Approximately 1,000.

d) Approximately 500.

Correct answer: A).

Source: https://www.ima.gov.tt/2018/04/06/ballast-water-the-travelling-sea/

18. Large container ships can fit up to 11,000 containers of cargo. If lined up, how long would it be?

a) 10 miles long

b) 24 miles long

c) 33 miles long

d) 44 miles long

Correct Answer: D)

Source: https://www.marineinsight.com/infographics-2/infographic-13-curious-facts-shipping-industry/

19. Shipping is the least environmentally damaging form of commercial transport and, compared with land-based industry, is a comparatively minor contributor to pollution from human activities. How much of the world's GHG emissions does shipping produce?

a) Only 10%.

b) Only 2.2%

c) Only 4.7%

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d) Only 7.8%

Correct answer: B)

Source: https://www.ics-shipping.org/shipping-fact/environmental-initiatives/

20. Modern trucks are very clean, and in some cases a good alternative to vessels, from an environmental point of perspective. Which engines do the trucks have that allow them to be more environmentally friendly?

Correct Answer: Euro VI Diesel Engines.

21. The World Shipping Council and its members are engaged in a number of efforts to adopt effective international regulations to address air emission from ships. The World Shipping Council was the first industry organization to endorse proposals for establishing stringent international controls addressing which air pollutants?

a) Nitrogen oxides (NOx).

b) Sulfur oxide (SOx).

c) Particulate matter (PM).

d) All of the above.

Correct Answer: D)

Source: https://www.worldshipping.org/industry-issues/environment

22. At any given time, how many shipping containers are travelling the high seas on ships? If you need help: it's the same number of people in Sri Lanka—the 58th most populous country in the world, according to the United Nations Population Division.

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a) About 20 million.

b) About 10 million.

c) About 5 million.

d) About 1 million.

Correct Answer: A)

Source: https://www.philspace.co.uk/news/20-interesting-facts-about-shipping-containers/

23. 40-feet containers tend to last longer than 20-feet ones as the former aren't always packed to their limit. If properly cared for, shipping containers can last over how many years?

a) Over 30 years.

b) Over 40 years.

c) Over 50 years.

d) Over 60 years.

Correct answer: A).

Source: https://www.philspace.co.uk/news/20-interesting-facts-about-shipping-containers/

24. A container ship travels long distances. In a single year, an average container ship travels the equivalent of __ the way to the moon and back. To put that into perspective, the moon is a vast 238,900 miles away.

a) 35%

b) 40%

c) 65%

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d) 70%

Correct Answer: D).

Source: https://list25.com/25-mind-blowing-facts-shipping-industry/

25. Most countries across the world possess and operate merchant ships. At present, which is the largest merchant fleet in the world that accounts for over 16% of the world's total tonnage?

a) Germany.

b) Greece.

c) France.

d) Japan.

Correct Answer: B).

Source: https://easyfreight.co.nz/blog/surprising-facts-worldwide-shipping-industry/

26. Ocean shipping is one of the most sustainable types of transportation. For example, a vessel from China to France emits less gas than a truck going from Houston to Oklahoma City.

Correct Answer: True.

Source: https://www.theguardian.com/sustainable-business/2014/aug/01/sustainable-shipping-is-making-waves

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