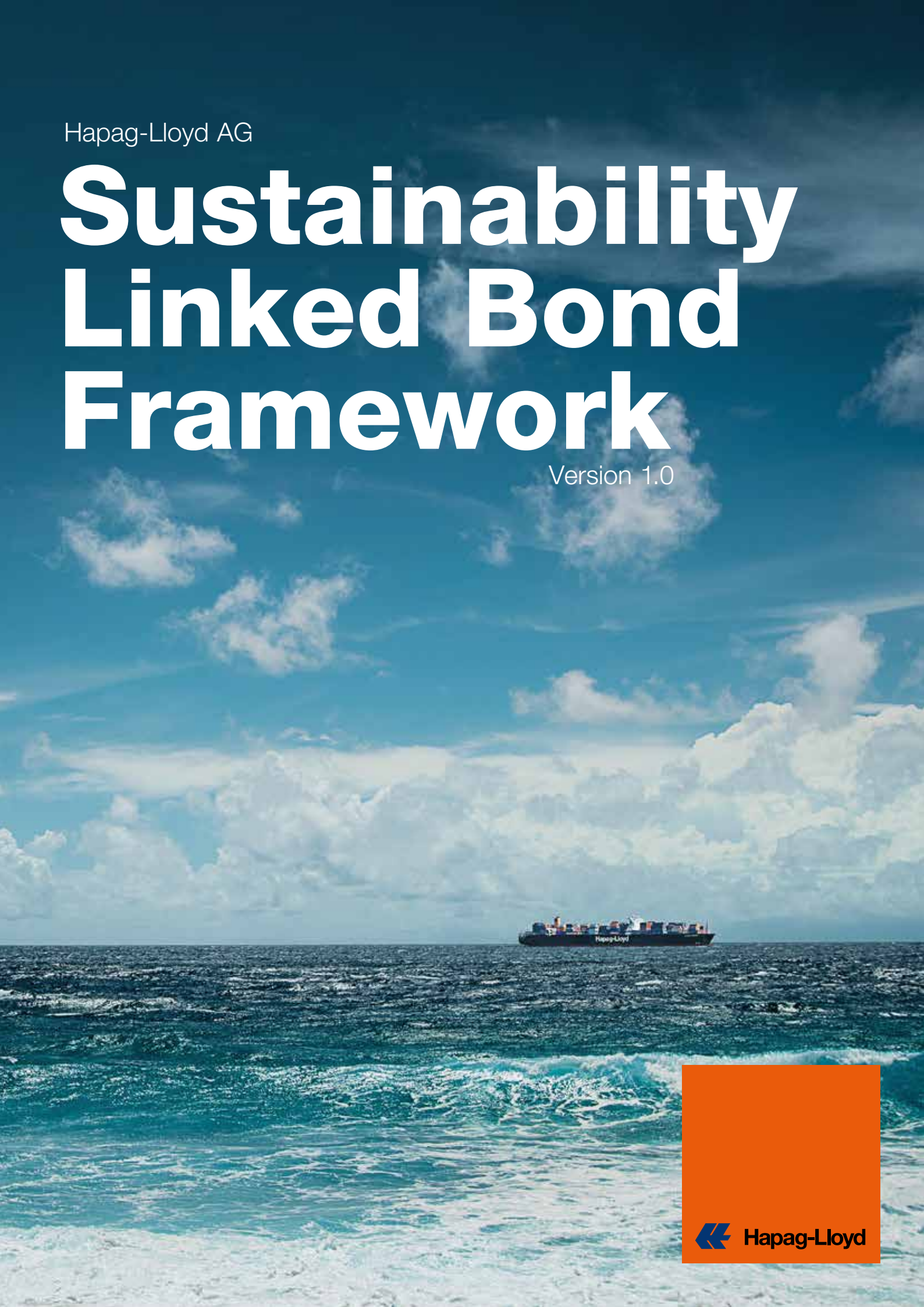
Hapag-Lloyd AG

Sustainability Linked Bond Framework

Version 1.0



Hapag-Lloyd

Hapag-Lloyd AG ("HLAG")

Sustainability Linked Bond Framework

Version 1.0
17th March 2021

1 Introduction

Hapag-Lloyd AG
Sustainability Linked Bond Framework

This document sets out the framework for HLAG's sustainability linked bond program, under which Hapag-Lloyd ("HLAG") intends to issue Sustainability-Linked Bonds ("SLB") in accordance with the Sustainability Linked Bond Principles ("SLBP") established by the International Capital Markets Association ("ICMA") in June 2020.

A SLB can be any type of bond instrument[1] for which the structural and/or financial characteristics can vary depending on whether the issuer achieves predefined ESG objectives – these objectives are measured through predefined Key Performance Indicators ("KPIs") and assessed against predefined Sustainability Performance Targets ("SPTs"). However, in contrary to Green / Sustainability Bonds, the proceeds of SLBs can be used for general corporate purposes and/or refinancings.

HLAG Mission and Sustainability Vision

With a fleet of about 230 ships and an annual transport volume of around 12 million TEU, HLAG is one of the world's leading liner shipping companies. We offer reliable transport solutions to our customers in 129 countries around the world. These include container transport by sea, but also encompasses transport services from door to door. With around 13,000 employees, we are on hand locally to serve our customers around the world.

Ocean shipping is the primary conduit of world trade, a key element of international economic development, and a central reason why the world enjoys access to a diversified spectrum of products. Seventy-five percent of internationally traded goods are transported via ocean going vessels. Products shipped via container include a broad spectrum of consumer goods ranging from food, beverages, clothing and shoes to electronics, machinery and furniture. Today container shipping is one of the world's most carbon-efficient forms of transporting goods and produces fewer grams of exhaust gas emissions for each cargo transported than air, rail or road transportation.[2]

Having said that we nontheless respect our ever increasing responsibility for future generations. Based on this one of the expectations we have of ourselves is to further minimize the environmental impact of our actions. To achieve this, HLAG seeks to invest in state-of-the-art technology of larger and more efficient vessels (such as vessels with LNG propulsion, more efficient hull shape and/ or coating), testing of alternative fuels like biofuel, to introduce digital solutions and to improve the routing of our fleet.

Furthermore, we combine the proven with the new as global quality and environmental management standards forming the basis of our activities. Through cooperative research (for example, via our partnership with the Hapag-Lloyd Center for Shipping and Global Logistics at Kühne Logistics University) and development projects and our involvement in initiatives – as a member of the Clean Cargo Initiative, the Ship Recycling Transparency Initiative, the EcoTransIT World Initiative, the Global Logistics Emissions Council, the Maritime Platform, Global Maritime Forum, Getting to Zero Coalition, the UmweltPartnerschaft or as a founding member of the non-profit initiative Cargo Incident Notification System – we make a significant contribution to promoting global environmental standards in liner shipping.

Furthermore we are striving to continue to improve our related public disclosure as we acknowledge the importance of such information for our stakeholders such as customers, vendors and investors. As an example we aim to participate and activiley provide data into the Carbon Disclosure Project beginning from 2021 onwards.

Fundamentals and Guiding Principles

Value-based and responsible actions are firmly anchored in HLAG's corporate structure. Our sustainability policy defines our concept of sustainability in the form of binding guidelines and principles. In them, we commit to protecting the environment and to ensure the health and safety of our employees. They supplement the content of the Global Code of Ethics, in which we have formalized our aspiration to comply with all laws and internal codes of conduct, without exception.

Our aim is to keep our impact on the environment and climate as low as possible. We have implemented high environmental standards for this purpose and therefore use cutting-edge technology as one method of ensuring compliance with them. Our activities focus on reducing our energy consumption and the CO_2 emissions of our fleet. We review the efficiency of our measures through internal and external audits. We also implemented various preventive measures in order to protect people, the environment, cargo, and property plant and equipment. These include audits according to ISO standards, the implementation of the safety management system on all our ships and the inclusion of environmental protection in the emergency manual.

The high standards that we set ourselves also apply to our suppliers and subcontractors. Together with our business partners, we continually seek solutions for improved sustainability in our transport chain.

Sustainability Management aligned with IMO and SDGs

Since 2018, the International Maritime Organization's ("IMO's") Marine Environment Protection Committee has pursued the goal of reducing absolute greenhouse gas emissions by 50% by 2050 compared with 2008 levels. HLAG supports this ambitious target.

Since 2008, we have cut our specific CO_2 emissions per TEU-kilometer by around 50%[3] by 2019. Further, HLAG aims to reduce its specific CO_2 emissions per TEU-kilometer by 20% by 2020 as compared with 2016 (as at 2019, HLAG were already able to achieve a reduction of around 17%). This targeted reduction of specific CO_2 emissions will be constantly revisited.

In addition to reducing greenhouse gases, our goal is to reduce air pollutants. In 2019, our fuel had an average weighted Sulphur content of 1.95% (previous year: 2.26%). This put our levels below those specified by the IMO threshold of 3.5% that was valid until 31 December 2019 for marine areas outside emission control areas (ECAs). New IMO requirements came into force on 1 January 2020. These requirements prohibit the use of bunker with a Sulphur content of more than 0.5% - unless exhaust gas cleaning systems known as scrubbers are used. To comply with this new requirements, we either (a) acquire compliant bunkers, (b) retrofit ships for operation with LNG (not possible for all ships), (c) retrofit ships with hybrid ready exhaust gas cleaning systems or acquire ships with respective propulsion systems.

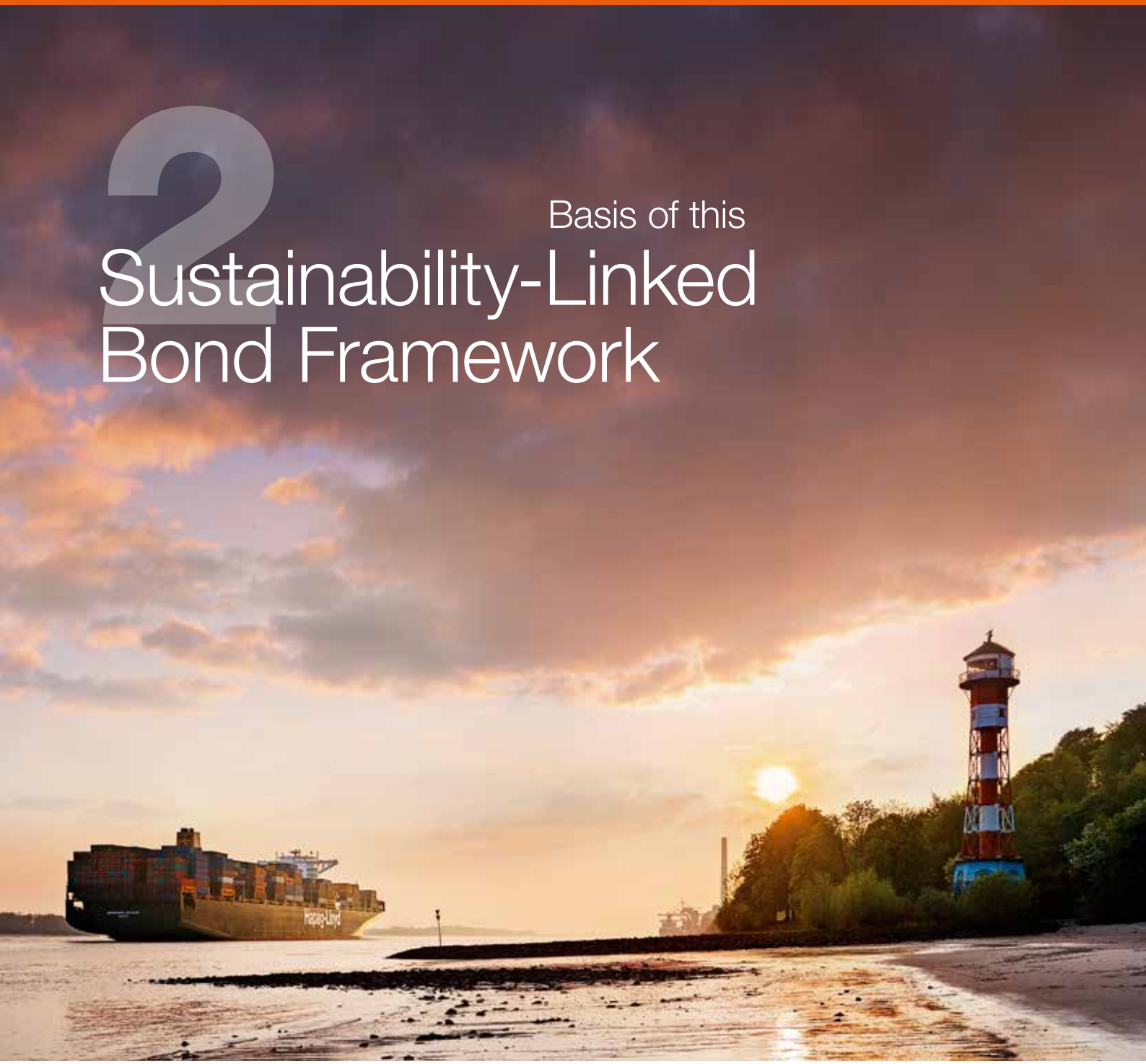
Furthermore, HLAG actively contributes to the Sustainable Development Goals ("SDGs") issued by the United Nations. Our sustainability management dealt extensively with the SDGs and linked them to our business activities. We communicated the results to all staff on the intranet and asked them to take part in the global survey on sustainability and the SDG's of our partner, Hamburg-based sustainability consultants Schlange & Co. We analysed in detail how competitors and companies from other industries contribute to achieving the SDG's. Subsequently, we compared the existing activities, measures and initiatives from a number of different areas with the content of the SDGs. We wanted to know which positive contribution HLAG makes towards the 17 SDGs and their 169 subgoals. HLAG already contributes to the following six goals: Quality Education (SDG 4), Decent Work and Economic Growth (SDG 8), Climate Action (SDG 13), Life below Water (SDG 14), Peace, Justice and Strong Institutions (SDG 16) and Partnership for the Goals (SDG 17).

In addition, the HLAG Group aims to contribute to the development of the green and sustainability linked finance market and to the growth of Socially Responsible Investments while at the same time diversifying its investor base and broadening the financial options it offers existing investors.

[1] Issued in accordance with RegS and/or 144A regulation as well as so called Nordic Bonds or Schuldschein instruments.

[2] World Shipping Council; 12.03.2021; www.worldshipping.org

[3] The specific CO_2 emissions based on the Clean Cargo method relate to 2019



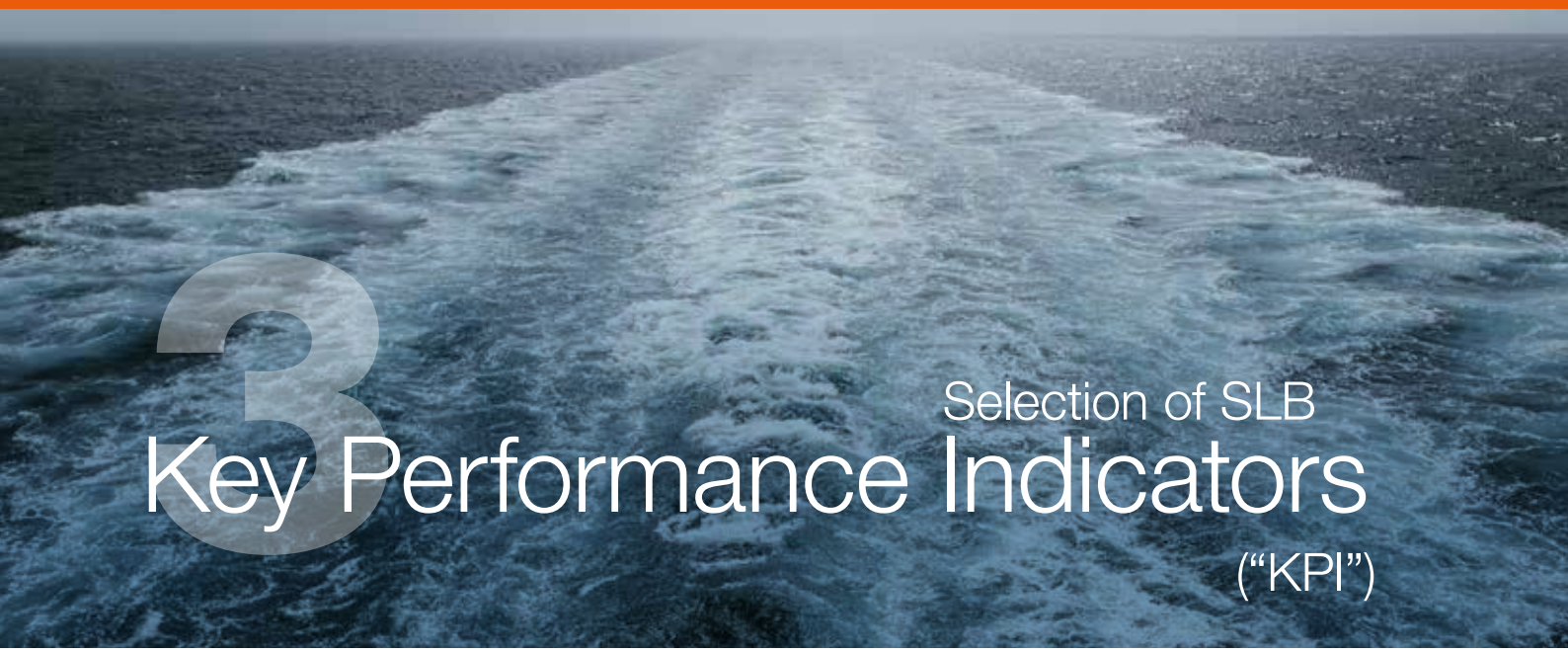
2 Basis of this Sustainability-Linked Bond Framework

For the purpose of defining and issuing SLB's and based on the 2020 ICMA SLBP, HLAG's Sustainability-Linked Bond Framework is presented through the following key pillars:

1. Selection of SLB Key Performance Indicators ("KPI")
2. Calibration of SLB Sustainability Performance Targets ("SPT")
3. SLB characteristics
4. Reporting
5. Verification

HLAG intends to publicly communicate their rational for the specific SLB KPI(s) selection, the background of the SLB SPT(s), the potential change of bond financials / characteristics and the trigger events leading to such change. Furthermore, HLAG will report annually on the performance under the set SLB KPI(s). The annual reporting as well as an overall respresentation of our alignment with the SLBP will be independently verified.

HLAG's Sustainability-Linked Bond Framework may be subsequently revised or updated to reflect its sustainability strategy as well as the continuous evolution of the market best practices.



3 Selection of SLB Key Performance Indicators ("KPI")

As a globally active liner shipping company, we are well aware of our major responsibility towards the environment. We actively work towards minimizing our impact on the environment and climate as much as possible, both on land and at sea. Decarbonization of container shipping is a major challenge for our industry over the next decades, and recognized as such by the IMO.

In late 2018, we created guidelines for our Strategy 2023, which will support our long-term, profitable and organic growth in the coming years. With our Strategy 2023, we want to differentiate ourselves through our exeptional quality and customer orientation, and further strengthen our position on the market. In line with our ambition to clearly differentiate ourselves as number one for quality we also want to be recognized for our standards in terms of environmental responsibility. In this light a reduction of greenhouse gas emissions and air pollutants has the highest priority for our external and internal stakeholders. Based on this we want to actively contribute to the United Nations Sustainability Development Goals and take urgent action to combat climate change and its impacts (Climate Action (SDG 13)).

As a liner shipping company, we are able to apply the greatest leverage for effective climate protection strategy in our fleet operations. We want to do this in part by increasing energy efficiency, introducing strict requirements for newbuilds and taking measures to reduce bunker consumption. Based on this a carbon intensity metric as KPI is best suited as the most relevant and meaningful benchmark for our environmental ambitions.

To measure the carbon intensity of our Owned Fleet we will use the Average Efficiency Ratio ("AER") as KPI. A carbon intensity metric appears to be more appropriate than an absolute emission measure, as the latter is ill-suited for comparison of emissions and decarbonization at the level of individual vessels or a group of vessels. AER is the industry standard for measuring carbon intensity, and the metric is recognized to be consistent with the policies and regulations of IMO-DCS, which is a mandatory regulation established by the International Maritime Organisation ("IMO") for the data collection and reporting of fuel oil consumption from ships, ("IMO DCS"). AER uses parameters of fuel consumption, distance travelled and deadweight tonnage and is reported in unit grams of CO_2 per tonne-mile (gCO_2/dwt-nm).

The AER is computed as average for the Owned Fleet over the full calender year. The fleet of owned vessels will develop over time and will include all vessels which are accounted for on the balance sheet of the HLAG group in accordance with the International Financial Reporting Standards ("IFRS") (the "Owned Fleet"). As of 31. December 2020 we did operate a total fleet of 237 container vessels, out of which 112 are part of our Owned Fleet. This definition of Owned Fleet is aligned with the emission reporting responsibility according to IMO-DCS.

In line with the IMO's fourth GHG Study from July 2020, we use the following formula for calculating AER based on the calender year:

$$AER = \frac{\sum_i C_i}{\sum_i dwt D_i}$$

Where:

- C_i is the carbon emissions for voyage i, using the fuel consumption and carbon factor of each type of fuel
- dwt is the deadweight ton at scantling draft of the vessel
- D_i is the distance travelled on voyage i

4 Calibration of SLB Sustainability Performance Targets ("SPT")

Shipping was initialy exluded from the Paris Agreement when signed in 2015. However, the IMO presented an own strategy for emission reduction in the shipping industry in alignment with the Paris Agreement. To reduce emissions from shipping the IMO has agreed on an ambition to reduce absolute green house gas emissions from the sector by at least 50% by 2050, compared to 2008 levels. IMO has also set a target to reduce carbon intensity with minimum 40% by 2030, pursuing efforts towards 70% in 2050. The IMO targets have been set-up as a response to the Paris Agreement.

In accordance with our Strategy 2023 we aim to achieve the highest possible transport performance with the lowest possible energy consumption through targeted measures on our ships, in containers, in the ports and at our sites. In order to be able to further differentiate ourselves and beome recognized for our high standards in terms of environmental responsibility, we target a reduction of the AER for our Owned Fleet of 60% by 2030 compared to 2008. This target is materially more ambitious than the target of IMO for the general shipping sector, which targets to reduce the carbon intensity by 40% by 2030 compared to 2008. The SPT of 60% reduction by 2030 however will only be one element of a holistic sustainability strategy which is planned to be developed until Q2 2021.

Regular investments in the energy efficiency of our ships have a long-term positive effect on the environment and our competitiveness. They also enable our ships to achieve a long service life of up to 25 years. In order to achieve our ambitious 60% reduction target however, HLAG has to do much more than just to conduct "business as usual". Moreover safeguarding compliance with our SPT ambition we need to continue to improve the fuel consumption and carbon intensity of the operation of our vessels (i.e. introduction of further fuel types such as LNG and Bio fuels, conversion of LNG ready units, modern and efficient Reefer Container Fleet etc.), follow strict requirements for newbuilds (i.e. investing into state of the art vessel technology such as dual fuel engines and vessels with highest standard Energy Efficiency Design Index ("EEDI")) and take additonal measures to reduce bunker consumption (i.e. network optimization).

Starting from the baseline AER in 2008 HLAG has set its AER reduction target for its Owned Fleet at 60% by 2030. For 2020 the AER reduction of the Owned Fleet has been calculated to be at 40,5% of the 2008 baseline. From 2020 onwards HLAG has set a SPT Trajectory which will result in meeting the SPT of 60% until 2030 (AER of 4,67). The SPT Trajectory is based on our existing fleet and a detailed fleet planning. As adjustments to the asset base can only be done with months and/or years of lead time (for example 2-3 years lead time for construction of newbuild vessels) the trajectory has a convex character (and not a linear style).

Actiual AER[4] and SPT Trajectory (AER) 2019-2030

	2008 (act)	2018 (act)	2019 (act)	2020 (act)	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Proposed Trajectory			7,30	7,30	7,25	7,18	7,10	6,83	6,70	6,31	5,85	5,43	5,06	4,67
Reduction compared to 2008			-37,5%	-37,5%	-37,9%	-38,5%	-39,2%	-41,5%	-42,7%	-46,0%	-49,9%	-53,5%	-56,7%	-60,0%
AER (Act)	11,68	7,09	7,09	6,95										

Our path from 2008 until 2020

We continously invested in measures to improve the efficiency of our ships. When building new ships or modernizing existing vessels, we were guided by the latest technical efficiency and environmental standards. We developed designs in accordance with or beyond to the latest technological efficiency and environmental standards. As an example the EEDI for six Dual Fuel Newbuild container vessels ordered in December 2020 is better than required by the current draft of Technical Screening Criteria 1(d) of the EU Taxonomy Technical Screening Criteria for Sea and Costal Freight Water Transport.

The ongoing monitoring of data from the ship operations of our entire fleet makes it possible for us to identify unused potential in the utilization rate of the ships with regards to carrying capacity. A central Network Operations Center has been established in the Headquarters with ~30 employees which constantly monitors and reviews the performance of our entire fleet. Our modern software solution allows us to provide standardized reporting of the actual performance of our ships. This enables us to optimize the planning of our routes and to reduce energy use and environmental impacts. From there we optimize workflows at sea and on land to help reduce our emissions. The Nework Operations Center also helps our vessels to identify severe weather pockets at an early stage allowing us to navigate around bad weather. Careful routing can then safe fuel as well as keeping our crew and our customer’s cargo safe.

We have set clear guidelines to keep our bunker consumption as low as possible, as fuel consumption is an important starting point when it comes to the continual reduction of energy use in ship operation. One way to increase energy efficiency is by reducing water resistence. Since 2014 various vessels have been fitted with a new bulbous bow and/or optimized propellers. Repainting the ships can also increase their energy efficiency. A complete underwater repaint is carried out where necessary every five years during a scheduled docking of the ship. Specific biofouling management plans are drawn up and with the help of digital solutions. This allows fouling to be quickly detected and removed. By removing the fouling on the affected ships, we were able to save energy in the form of fuel. Together these initiatives make the ship’s propulsion more efficient as water resistance can be reduced and hence resulting in fewer emissions.

By connection to onshore power the auxiliary diesel engines which generate electricity can remain switched off while the vessels are in port. The result is significantly improved air quality near the harbor, noise cancelling and reduction of CO_2 emmissions. 14 vessels of our Owned Fleet have been fitted with the necessary equipment for connecting to onshore power while in port.

HLAG possesses one of the largest and most modern reefer container fleets in the world. We were one of the first shipping lines to introduce highly energy-efficient reefers, which currently constitute the bulk of our reefer fleet. To keep the inner temperature at an optimal range from minus 30 to plus 30 degrees centigrade, the refrigerating machine in the reefer container only consume the power that is needed to maintain the temperature as requested without compromising the accuracy. This intelligent performance control supports the environment by saving large quantities of energy and thereby fuel consumption of the ship. As a result the average energy consumption per 40-foot reefer container has decreased in the last 18 years from 6,8 kWh/unit (2002) to 2,9 kWh/unit in 2020.

Through all these efforts – among others – HLAGs Owned Fleet AER decreased from 11.68 in 2008 to 6,95 in 2020 which equals a reduction of 40,5%.

[4] Actual AER for 2018 is based on own not externally verified data sources
Actual AER for 2019 is based on externally verified IMO DCS
Actual AER for 2020 is based on data collection according to IMO DCS which is not yet externally verified

Our ambition until 2030

Although we achieved a CO_2 reduction by 40,5% in 2020 already and thereby achieved the IMO target (reduction of 40%) we want to go beyond this goal to differentiate ourselves from our peers and contribute more by improving our efficiency reduction further to 60% by 2030. In order to achieve this we plan substantial additional investments and measures to further reduce our greenhouse gas emissions.

Until 2025, we plan to modernize our fleet by phasing-out less efficient vessels that are by than close to or older than 25 years and replace them with more efficient new or younger vessels. As an example in December 2020, we ordered six 23,5k TEU state-of-the-art Dual Fuel Newbuild vessels, to be delivered in 2023 which will reduce the CO_2 emissions by up to 25%. As this Dual Fuel technique comes at additional costs compared to a conventional fueled ship the investment into these six dual fuel newbuild vessels is a strong sign of our willingness and commitment to contribute already today to significant CO_2 savings. Furthermore the six vessels form part of a Green Loan according to the ICMA Green Loan Principles covered by HLAG’s Green Financing Framework and confirmed by a corresponding Secondary Party Opinion provided by DNV.

Furthermore, in 2019, we decided to retrofit the 15k TEU “M.V. Sajir” (now called Brussles Express) into a dual fuel ship as a pilot project for our group. The conversion is expected to be completed in Q1 2021 and will be the first conversion of a containership of that size. The Brussels Express will improve its AER significantly after conversion.

Onshore power, as an option to avoid “auxiliary diesel” to cover the energy requirements for docked ships, has also increasingly being used in the recent past. This trend is expected to strengthen in the coming years and if sufficient number of ports offer a power plug in the future HLAG will continue to install this techniques on its vessels. A number of ships in the fleet of HLAG are already technically prepared and can be quickly equipped with Onshore Power units.

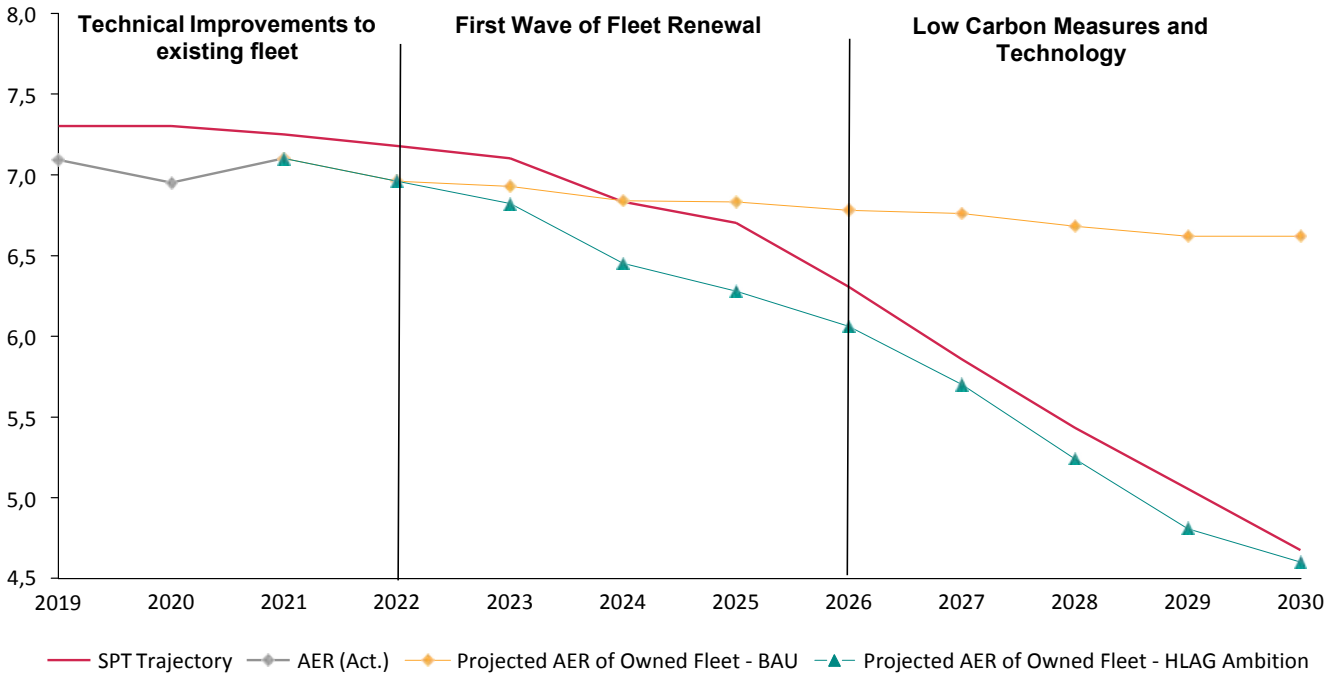
Furthermore HLAG is commtted to actively analyse and review the availability of and ability to use alternative fuels. As one example one of our ships was refuelled in Rotterdam with eco-friendly biofuel in 2020. For the first time, the “Montreal Express” was being powered by so-called “B20” fuel, which consists of 80 percent low-sulphur fuel oil and 20 percent biodiesel based on cooking oils (UCOME) and fats that had previously been used in the food service/catering industry. Compared to conventional fuels pure biodiesel can reduce the CO_2 emissions by more than 80% over the life cycle. Hapag-Lloyd intends to use the test to gain experience and information on the properties of the fuel in real-world use. After completing the analysis and if it is concluded that the bio fuel test was successful, more ships from Hapag-Lloyd’s fleet could operate using some sort of bio fuel in future. We expect to gradually increase the share of alternative bio fuels in our fuel mix towards 2030 which will further reduce the carbon intensity of our fleet.

Furthermore we are constantly reviewing our global network in order to optimize the use of our ship system. The optimization of port rotations, port stays and number of round voyages significantly contributes to the efficiency and fuel consumption of our fleet.

We continously invest into our container fleet and as one of the market leaders for refrigerated cargo a large part of our investments are dedicated to modern and state of the art reefer containers. In this light we have continously reduced the energy consumption of our overall reefer fleet and will continue to do so over the next years.

Building on the above and based on the starting point of 2020 with an AER of 6,95 we have constructed a SPT Trajectory which will take account of the fact that required actions may take months or years of lead time (i.e. orders of newbuild vessels, phasing out mid-aged vessels, availability of alternative fuels, conversion of vessels such as Brussels Express, etc.). At the the same time however the SPT Trajectory shall be ambitious enough and beyond business as usual to achieve our SPT (60% reduction) by 2030. The SPT Trajectory is based on a detailed fleet plan as well as reasonable planning assumptions based on most recent available information for the years 2021 ff.

SPT Trajectory and projected AER 2019-2030



If HLAG were to conduct just business as usual the SPT Trajectory will be breached in 2024 as normal fleet renewal measures would not go far enough (see graph "Projected Fleet AER of Owned Fleet – BAU"). In order to comply with the SPT Trajectory HLAG needs to initiate further measures such as consequential fleet renewal, further addition of Dual Fuel ships, usage of alternative fuel types (see "Projected AER of Owned Fleet – HLAG Ambition").

To met the ambitious SPT, HLAG has to go beyond conducting business as usual. Next to a consequential modernatization of its fleet HLAG depends on the possibility to actually implement operational and technical innovations to improve energy efficiency. In case it turns out that this is ultimately not achievable (i.e. absence of broader availability of alternative fuels, customer acceptance/preference, etc.) HLAG may not be able meet its SPT by 2030.

Each SLB issued under this framework will in its security specific documentation refer to the dates at which compliance with the SPT Trajectory will be assessed (the Target Observation Date(s)). On such Target Observation Date, compliance with the SPT Trajectory will be achieved if the AER for HLAG's Owned Fleet meets or is lower than the value set out in the SPT Trajectory for that specific date. If such a Target Observation Date falls between two of the annual AER levels outlined in the SPT Trajectory above, then the SPT for that Target Observation Date should be calculated using linear interpolation between the annual levels in the SPT Trajectory. The respective Target Observation Date(s) will be outlined in the security specific documentation.

5 Sustainable Linked Bond Characteristics

Characteristics outlined in this framework are applicable to all Sustainability-Linked Securities issued under it. The financial characteristics of any security issued under this Framework will be specified in its corresponding security documentation including but not limited to the KPIs and SPTs with the Target Observation Date.

A failure to provide evidence for having achieved the applicable SPT(s) (referring to the reporting and verification section for details) for the applicable Target Observation Date(s) as set out in the security specific documentation, results in a Trigger Event. A Trigger Event will then change the financial characteristics of the Sustainability-Linked Bond as outlined in the security specific documentation. This may include, but is not limited to, margin adjustment, coupon adjustment or repayment amount adjustment. For the avoidance of doubt, for the financial characteristics to remain unchanged for any instrument issued under this framework, HLAG must

i. for the relevant time period, report an AER performance lower than or equal to the applicable SPT(s) at the specific Target Observation Date(s) specified in the security specific documentation
ii. provide and make public the relevant reporting (as per the reporting section of this framework)

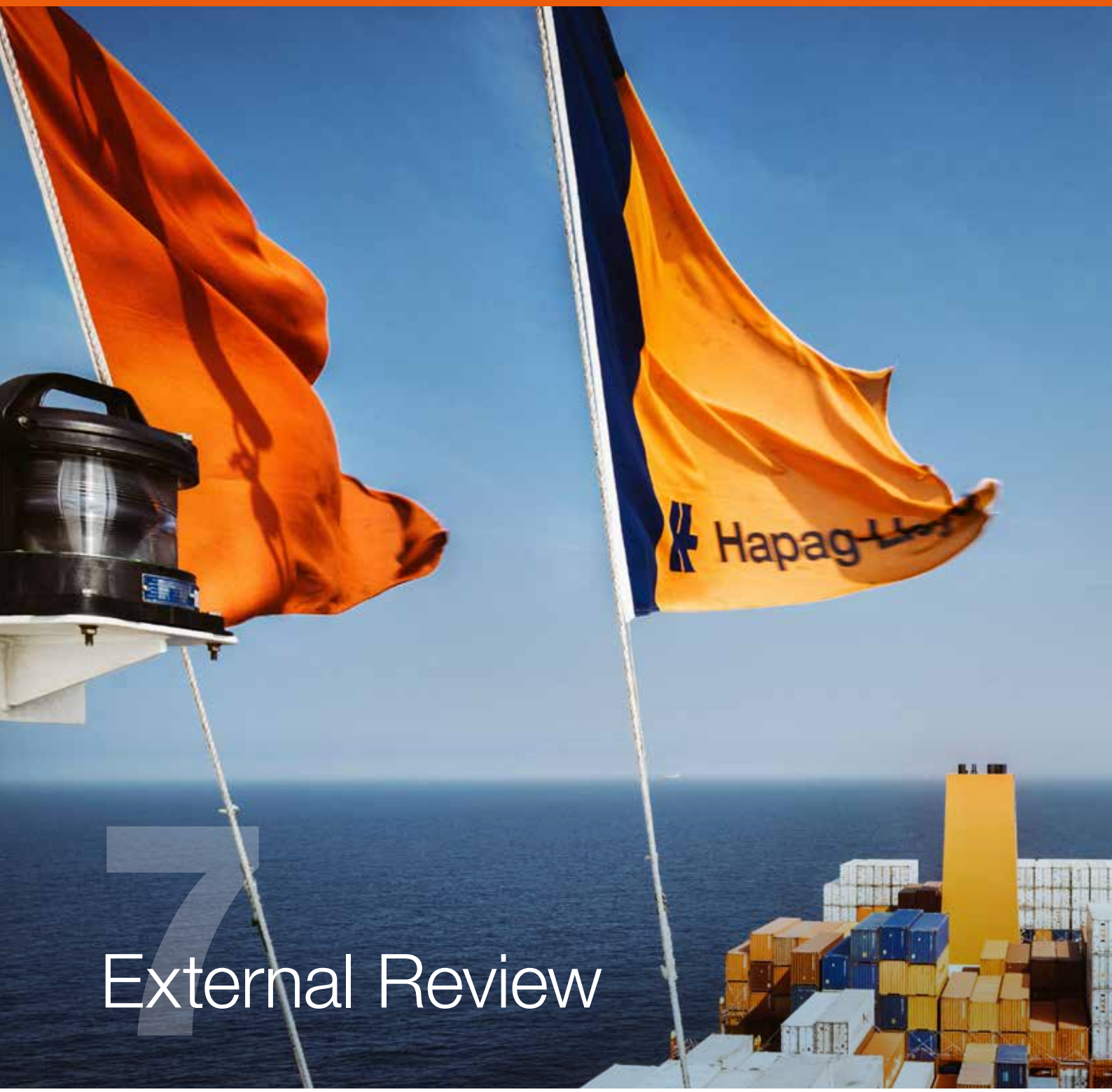
HLAG is currently in the process of redefining its holistic ESG strategy which will be further linked to our strategy 2023 and which will vest in the way we work in the future. This holistic ESG strategy is being expected to be developed in Q2 2021. The SPTs set out in this framework will remain applicable troughout the tenor of any bond issued under this framework. However, the SPT Trajectory (set out in section 4 of this framework) may change following a material deviation from the holistic strategy being developed until Q2 2021 or any material fleet transactions. These fleet transactions could include, but not limited to, mergers and acquisitions, spin-offs and purchase and sale of companies and/or vessels, materially impacting the structure of the HLAG group. Any change of the SPT Trajectory needs to be reviewed according to section 7 (External Review).

6 Reporting

In order to provide investors of the SLB and related other stakeholders with adequate information on the progress of our emission reduction in light of the SLB SPT, a Sustainability-Linked Finance Progress Report ("SLFPR") will be made publicly available on HLAG's website. The report will be published annually. This includes, but is not limited to:

- The SLB KPI performance (AER level) for the relevant time period
- SLB KPI alignment with the SPT Trajectory for the relevant time period
- An updated list of the Owned Fleet and confirmation that Statements of Compliance for fuel oil consumption reporting have been issued for all vessels

The SLFPR will be externally verified.



7 External Review

In order to provide transparency to investors and in alignment with the SLBP, HLAG will ensure an external and independent verification by one or more qualified external reviewer(s). The external reviewer(s) will be chosen by HLAG in accordance with the Voluntary Guidelines for External Reviews developed by the Green and Social Bond Principles. HLAG has the discretion to change the external reviewer(s) subject to fulfilling the requirements set out herein.

This framework and the below reports will be published on our website.

Second Party Opinion

Based on the above HLAG has engaged with DNV as an external reviewer to provide, in accordance with the Voluntary Guidelines for External Reviews developed by the Green and Social Bond Principles, an independent, ex-ante Second Party Opinion on HLAG's Sustainability-Linked Bond Framework.

The Second Party Opinion will be made publicly available on HLAG's website.


www.hapag-lloyd.com