



ENVIRONMENTAL REPORT 2016

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PUBLISHER'S DETAILS AND CREDITS

Published by: TUI Cruises GmbH

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Valid as of: April 2017 (Subject to change after going to print)

EDITORIAL

Ladies and Gentlemen,

With the commissioning of *Mein Schiff 5* in July, our fleet grew to five ships during the reporting year and we have come a little closer to our corporate target of operating one of the world's cleanest cruise ship fleets by 2020. With our new arrival, we have again set the focus on measures aimed at environmental protection. Just like our other new-builds, the features of this ship include outstanding energy-efficiency and a comprehensive system of exhaust gas treatment. To date we are the only cruise company in the world to have consciously decided to not simply operate these exhaust gas treatment systems inside the special emission control areas according to the regulations. As we believe environmental protection is not subject to geographical borders, we deploy the systems on a continuous basis, worldwide and around the clock.

In addition to this, we pursued our concept of continuous improvement in environmental protection through numerous activities throughout the reporting year. As we are of the opinion that we are able to achieve more through joint efforts, we work in a large number of projects together with partners such as research institutes or environmental organizations. In 2016, we also initiated a project that is of particular concern to me.

Together with the sustainability initiative Futouris, we are involved in reducing food waste. For the first time, we are measuring all the food waste generated on a cruise ship in a comprehensive and systematic way, so that we will then be able to work with our project partner to identify the potential and specific measures that will help to reduce food waste in the long term and give impetus to the industry as a whole.

Another major project in this reporting year was the first extensive stakeholder survey on the environmental performance as well as topics. We will be presenting the initial results of this survey as part of this report. However, the actual work for us is only beginning now. Based on the results, we will be taking a very close look at those issues for which we have not yet been able to meet our stakeholders' expectations and at how we can actively improve in these areas – even if this only involves better communication of what we have already achieved. This report is one way in which we can contribute to this latter point.

I wish you a stimulating read



Wybcke Meier

Chief Executive Officer
Chairwoman of the Management Board



OVERVIEW

Environmental protection at TUI Cruises



Environmental management

In 2015, the **Green & Fair shore excursions** contributed approximately € 190,000 to the regional environmental organizations **Pottwale e. V.** and **SECORE International**.

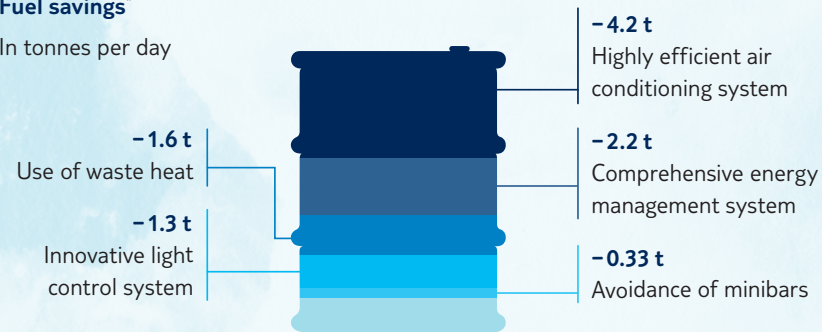
Energy efficiency

Total energy consumption relative to comparable cruise ships*
-30 %

Per person / overnight stay 2016:
Fuel consumption 0.020 t
Reduction of emissions (CO₂) -1 %

Fuel savings*

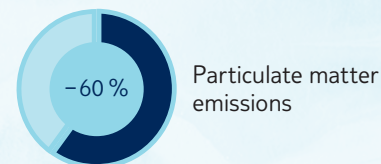
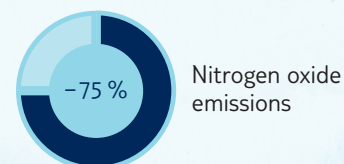
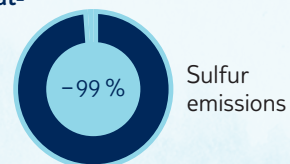
In tonnes per day



Additional measures: route optimization, slow-steaming and low-friction underwater coatings

Combined exhaust gas treatment system, comprising hybrid scrubbers and catalytic converters

Reductions of up to:



Water

Modern effluent treatment plants on board purify all generated wastewater

Water saving measures

Water and energy-efficient appliances in the laundry

Reduced washing of towels due to towel cards, water savings
-30 %

Utilization of condensed water from the air conditioning systems, e.g. in the laundry

Sensor-controlled taps in public toilets on the newbuilds

Waste

Waste separated into 6 categories:

- Glass
- Metal
- Paper
- Food waste
- Plastic
- Hazardous waste

Recycling quota
25 %

Waste per person / overnight stay in 2016
9.01 l

Annual savings due to dispenser systems

Water dispensers
2,500 fewer bottles of water per day and per ship

Dispensers for shampoo and shower gel
510,000 plastic bottles saved on the newbuilds

* Only for newbuilds.

TUI Cruises – at a glance.

With *Mein Schiff 5*, which was named in July, and the further expansion of routes, TUI Cruises maintained its growth course in 2016. At the same time, minimizing the effects of travel on the environment at much as possible remained a key corporate objective.

Capacity utilization of more than 100 % in 2016 again confirmed the feel-good concept with which TUI Cruises entered the German-speaking market in 2009 with Premium All-Inclusive cruises. The maximum values for customer satisfaction are similarly positive – especially with regard to the friendliness of the crew, the cabin amenities as well as the variety and quality of the restaurants, bars and lounges. With the entry into service of *Mein Schiff 5* in July, the fleet comprises five ships in 2016. One of the most important awards, which TUI Cruises received in 2016, demonstrates the high quality of the product in the international comparison. For the second time in succession, the renowned "Berlitz Cruising & Cruise Ships Guide" selected a ship from TUI Cruises, namely *Mein Schiff 4*, as the best ship in the world in the category "Large Ships". Taking second place was its sister ship *Mein Schiff 3*.

More room for growth

As well in terms of the destination areas offered, the signs pointed towards growth for TUI Cruises in 2016. In the winter of 2015 / 16, *Mein Schiff 1* set sail for Asia for the first time. In winter 2016 / 17, Central America followed as a new destination area. During this voyage, the destinations of *Mein Schiff 4* included Montego Bay on Jamaica, Cozumel in Mexico, Puerto Limón in Costa Rica and Cartagena in Colombia.



The constant growth of the company is also becoming apparent at the shore-based locations in Hamburg and Berlin. Following the move of employees in Berlin to larger premises last year, parts of the Hamburg workforce had to move into alternative premises in January 2016 due to a lack of space. Now the move into the Double-X building in Heidenkampsweg in Hamburg is scheduled for the summer. Office, communal and conference rooms jointly designed by the employees in an interactive process will then offer sufficient space for the whole team again.

TUI CRUISES GMBH

Foundation: as a joint venture of RCL and TUI AG in 2008

Employees & crew in 2016: 356 on shore, approx. 4,600 crew members on board

Concept: Feel-good ships with Premium All-Inclusive Concept on 80 routes in the North and Baltic Seas, the Mediterranean, Canaries, the Orient, in Asia as well as in the Caribbean and Central America

Ships in 2016: five in operation, three under construction. In 2017 *Mein Schiff 6* will be named, in 2018 and 2019 newbuilds will replace *Mein Schiff 1* and *Mein Schiff 2*



ENVIRONMENTAL MANAGEMENT

Environmental protection is an integral part of the TUI Cruises corporate strategy. Within this strategy, environmental management ensures that structures are improved and the environmental targets remain on course.

Targeted action.

The environmental management on shore is closely linked with the shipping operation: this is one reason why almost all the self-imposed environmental targets were achieved in the reporting year. And since the end of 2016, the Environmental Officers are part of the TUI Cruises management staff on board.

As a result, the selection and further development of the Environmental Officers now also falls under the responsibility of TUI Cruises. The company has made this change in order to link those responsible for environmental protection on board even more closely with the corporate philosophy of TUI Cruises. All Environmental Officers have a qualification in areas such as environmental technology, engineering, marine biology or environmental sciences. At least every 18 months, they take part in training courses for Environmental Officers on shore, which provide instruction in environmental processes and guidelines, the latest technical changes and projects, data collection and verification, waste and effluent management as well as future regulations and requirements. In addition, the training courses promote the important exchange with the shore-based teams and other Environmental Officers of the parent company RCL.

Measures from environmental workshops

From the environmental workshops held in 2016 and the follow-up events with the different departments during the reporting year, TUI Cruises developed a total of 70 specific environmental measures throughout the company, which were initiated under the direction of the Environmental Management Department. Of these measures, 24 affect the

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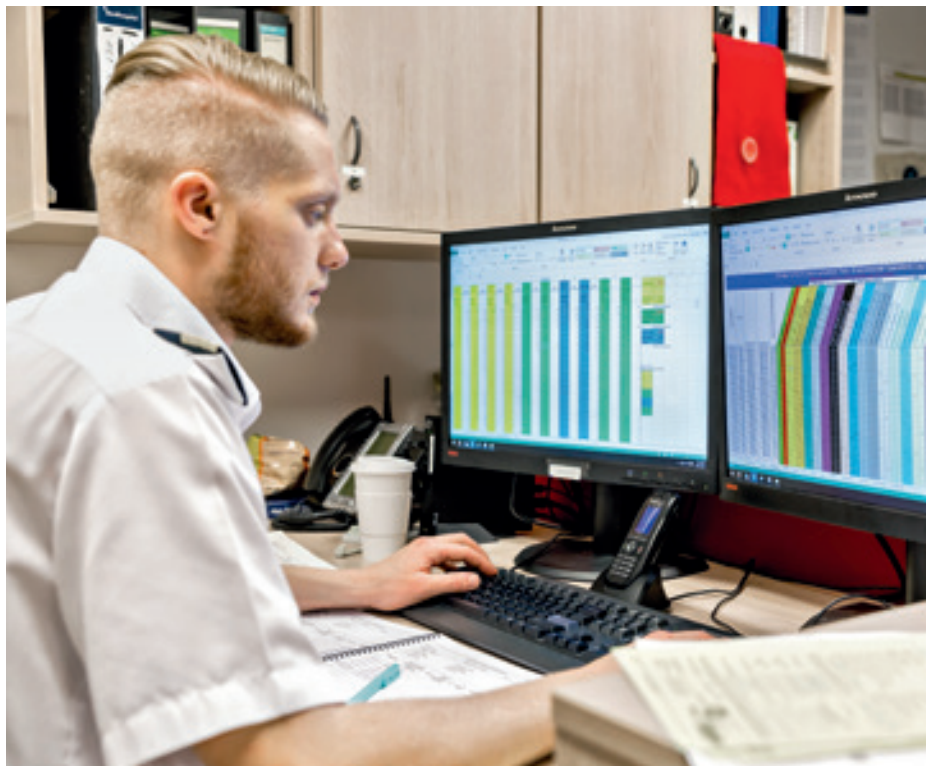
Cooperation with and among the Environmental Officers is characterized by a close cooperation and mutual trust within this multicultural team.

“

Lucienne Damm
Senior Environmental Managerin

field of marketing while 46 affect operations. In marketing, the measures refer in particular to the environment-friendly design of print media. This includes, for example, the use of mineral oil-free ink and recycled paper as well as the promotion of digitization measures. Among the measures in the field of operations are creating awareness amongst the guests for environmental topics in the Kids/Teens program and the integration of a sustainability clause in the General Purchasing Terms & Conditions. Furthermore, the company has undertaken adaptations to make suppliers aware of its standards in terms of labor and environmental law and has drawn up a blacklist of gastronomical products, which are produced from endangered species.

Desk work is also part of an Environmental Officer's daily routine. Jeremy Etler planning waste disposal for the upcoming voyage.



ISO 14001

Recertification in accordance with the new ISO 14001:2015 standard took place during the reporting year. Revision of the DIN 14001 standards means that a stronger focus was directed towards the environmental impacts during the lifecycle of the products and processes as well as on risk management and stakeholder considerations. The *Mein Schiff®* fleet is also ISO 14001 certified. Principal factors contributing to the successful certification were continuous improvement in the fields of CO₂ emissions and waste reduction.

LUCIENNE DAMM

has been in charge of the Environmental Department since 2011. The politics graduate, who previously worked for the Nature and Biodiversity Conservation Union (NABU e. V.), now reports directly to the Vice President Operations and the CEO.



In autumn of 2017, Environmental Officer Athanasios Kallikis will be traveling in US waters for the first time with *Mein Schiff 6* and is already preparing himself intensively for the regulations that apply there.

Sustainable mobility management introduced

One important project of the environmental management during the reporting year was the development of a sustainable and environmentally friendly concept of employee mobility. In this connection, TUI Cruises decided to take part in a nationwide pilot project: Mobil.Pro.Fit. is a joint project by B.A.U.M. Consult GmbH and B.A.U.M. e. V., which is supported by the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety as part of an initiative decided by the German Bundestag. By taking part in the project, TUI Cruises extended the company's environmental management by adding the aspect of environmentally friendly employee mobility. It developed a sustainable company mobility management scheme in workshops with other participating companies from Hamburg and in consultancy appointments with B.A.U.M. e. V. conducted on site. Using targeted actions, the company's carbon footprint is reduced in the fields of commuting routes, business trips and vehicle fleet. In this way, TUI Cruises is helping to keep the city's air clean, reducing company mobility costs and promoting the health of employees. In December, TUI Cruises successfully passed the final success control by B.A.U.M. e. V. and the local authority responsible for economics, transport and innovation, and since has been recognized as a Mobil.Pro.Fit company.

Focus on the supply chain

Again in 2016, the commitment to environmental management did not stop at the company's boundaries. This is illustrated by the fact that during the reporting period, TUI Cruises conducted three environmental assessments on suppliers, which resulted in valuable suggestions and ideas for further inspections. In this context, the interfaces to the Quality Management and to the purchasing processes within the company undergo detailed consideration in order to integrate sustainability aspects into the purchasing process. Important aspects here include environment-friendly packaging, sustainable materials, ecological manufacture of the products and – particularly in the case of technical products – the energy efficiency.

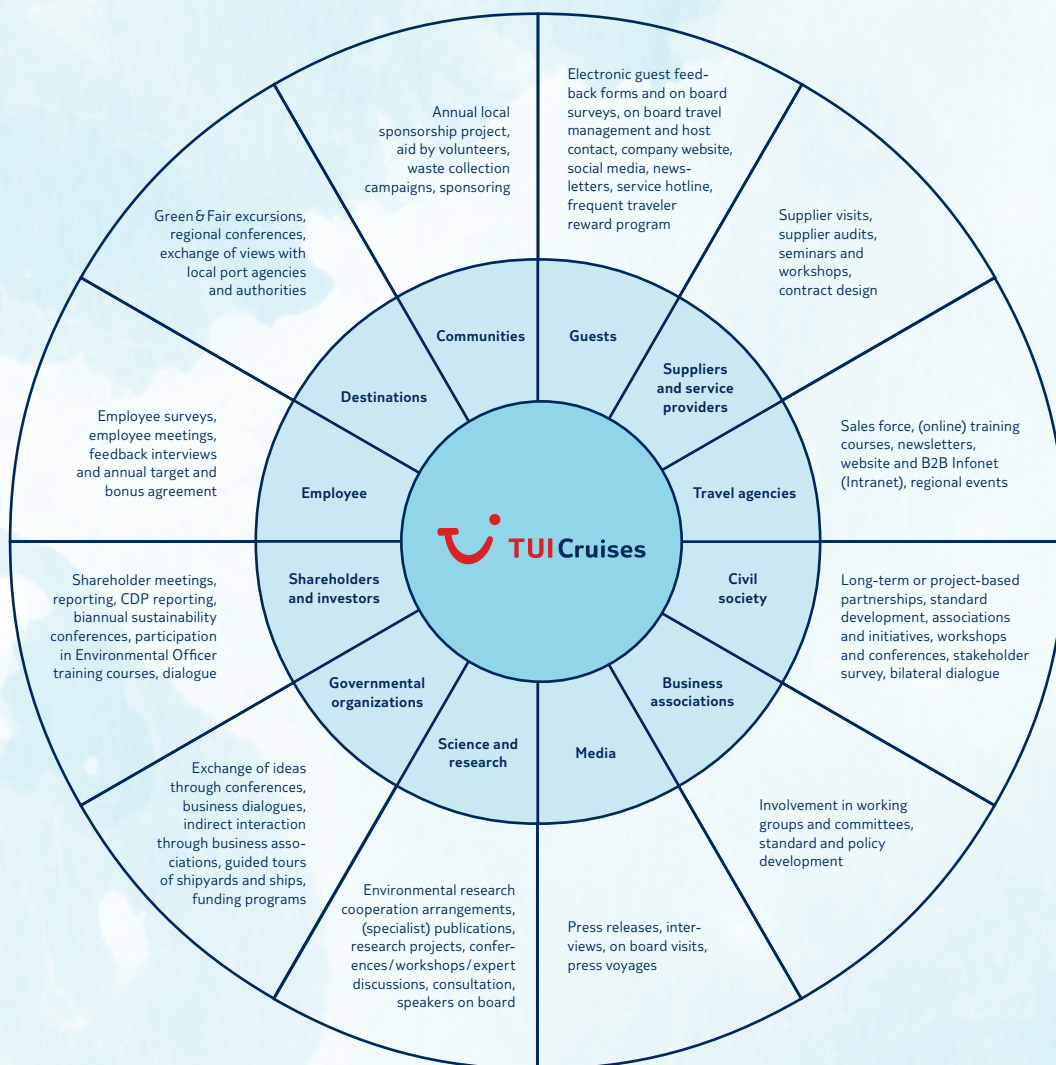
An intensive examination of the supply chain continues to hold the attention of the Environmental Management at TUI Cruises. Consequently, the company will establish first specific instruments, such as an Audit Manual and a Code of Conduct, during the current business year. This will ensure a more sustainable supply chain and greater inclusion of the suppliers into efforts directed towards achieving environmental protection and sustainability.

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STAKEHOLDER ANALYSIS

Stakeholder groups and methods of interaction

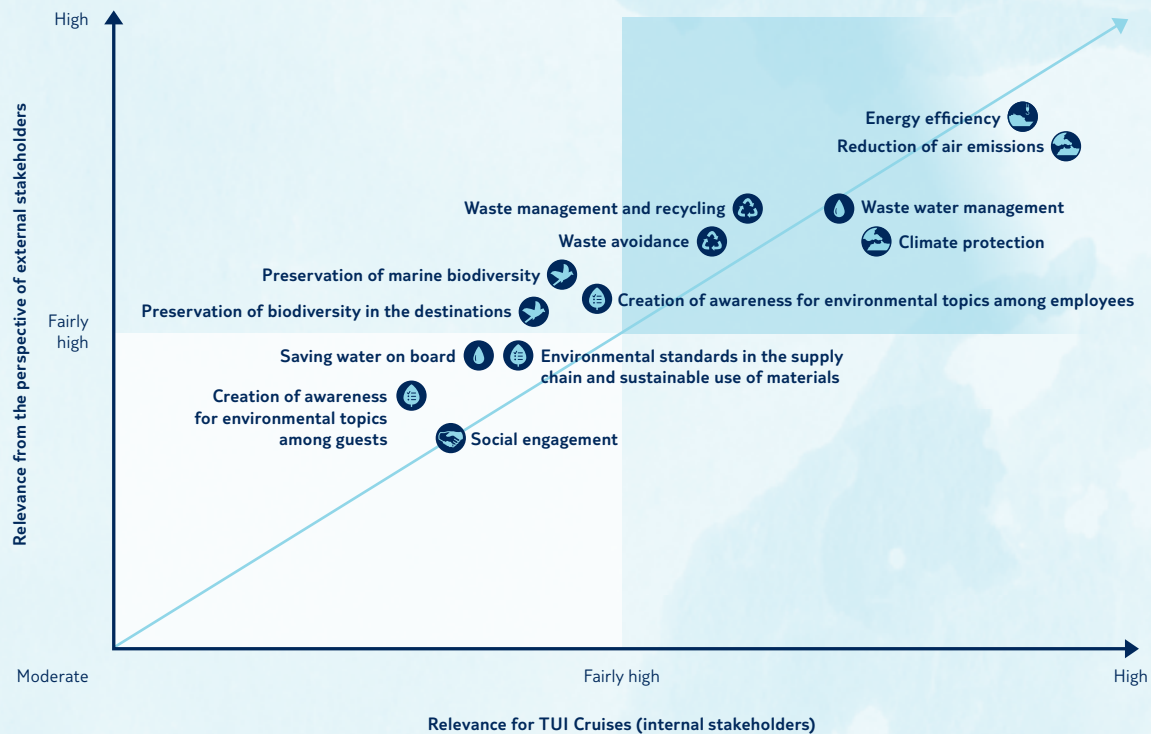


During the course of recertification following the new ISO 14001 standard, TUI Cruises conducted an extensive stakeholder analysis. In preparation for the first comprehensive stakeholder survey on the topic of environmental protection, these data were processed again in order to acquire an in-depth understanding of the individual stakeholder groups and the ways in which they interact

with TUI Cruises. The chart above shows the variety of ways in which external and internal stakeholders influence TUI Cruises and which stakeholders are important for TUI Cruises to enable the pursuit of active environmental protection. We use different mechanisms for the dialogue and exchange to be able to react to the concerns and suggestions of our stakeholders.

MATERIALITY MATRIX FOR THE ENVIRONMENT

Relevant areas of action for internal and external stakeholders



The stakeholder survey on the topic of environmental protection was then conducted at the beginning of 2017. The response of the relevant stakeholders to the anonymous online survey was high: a total of 641 people submitted their assessment of the relevance of environmental issues and their rating of the environmental activities carried out to date by TUI Cruises. While conducting and evaluating this survey, TUI Cruises enlisted support from a consultancy agency that specializes in sustainability. The aim of the survey was to further develop the corporate environmental strategy and to examine awareness of previous activities and achievements in the field of

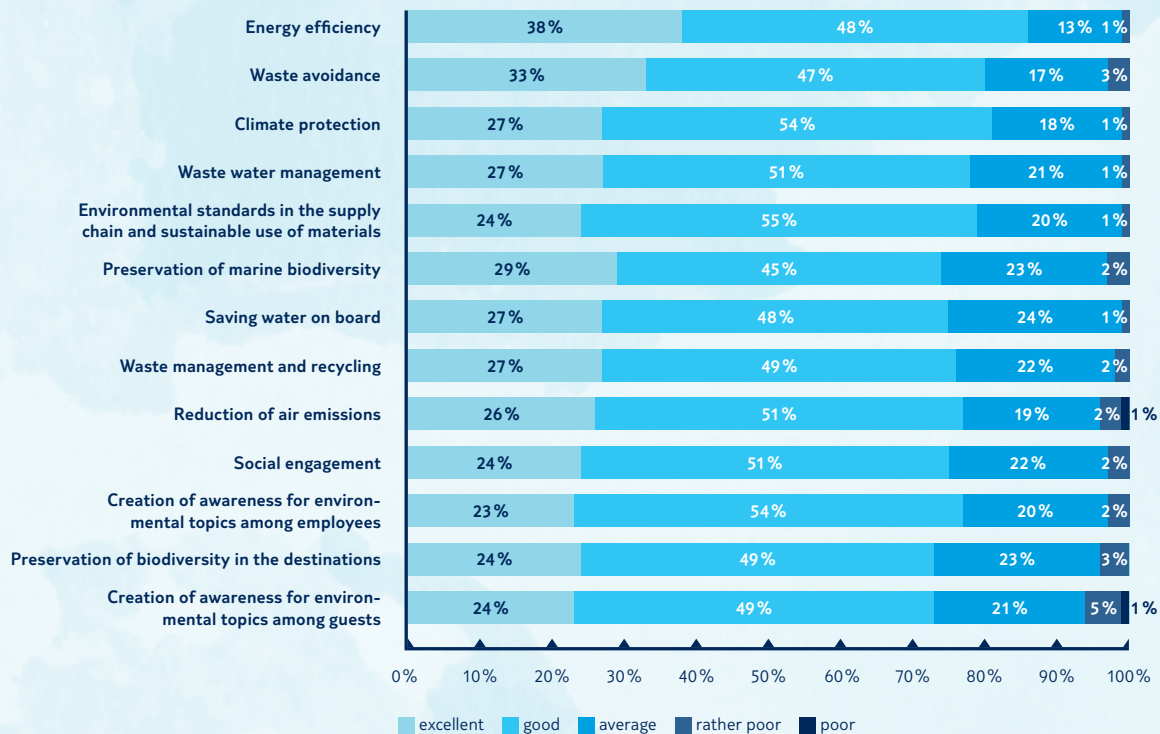
“
We are evaluating the
survey thoroughly so that
we can adapt the key
points of our environmen-
tal strategy to the results.

“
Wybcke Meier
Chief Executive Officer
Chairwoman of the Management Board

environmental protection. In the results, the stakeholders rated all the environmental issues that TUI Cruises has been involved with to date as relevant. Of these issues, respondents assigned the highest relevance to those of energy efficiency and reduction of air emissions. These were followed by the issues of waste water management, waste disposal and recycling as well as climate protection and waste avoidance. In the case of the last-mentioned category, many stakeholders considered the aspect of food waste to be particularly important. On a scale ranging from “poor” to “excellent”, stakeholders rated the overall environmental performance of TUI Cruises as “good”.

RATING OF COMMITMENT

Comprehensive appraisal by all stakeholders



The highest ratings were recorded for the company's energy efficiency efforts, the activities to avoid waste and climate protection. Despite the overall good rating of the commitment shown by TUI Cruises to reduce air pollutants, the stakeholders regarded this topic as being in need of further optimization.



Advances in the reporting year

In 2016, TUI Cruises...

- implemented digitization measures in order to reduce print products.
- conducted three supplier checks with a focus on the subject of environment. The

suppliers were classified in the range from good to excellent.

- introduced a company mobility management and obtained certification for this scheme as part of the national Mobil.Pro.Fit. project.
- conducted environmental workshops and follow-ups with five marketing departments.
- implemented a checklist for environment-friendly events throughout the company.
- extended the information offered for employees to environmentally relevant topics.
- switched the business stationery to recycled paper.

641 PEOPLE

took part in the survey. 97 German-speaking and 21 international experts on environmental issues, 472 guests of the Mein Schiff® fleet and 51 employees completed the questionnaire.



EMISSIONS



Along with the entire cruise industry, TUI Cruises sees its responsibility in the global challenge to actively reduce emissions. Further reductions in atmospheric pollutants and CO₂ emissions remain a target of the company's environmental strategy.

TUI Cruises on track with emissions reduction.

TUI Cruises is able to present a positive outcome for 2016 in connection with the strategic target of continuously reducing environmentally harmful emissions. From CO₂, via sulfur to nitrogen oxides, TUI Cruises was again able to reduce emissions per person and overnight stay.



TUI Cruises has come closer to its target defined in the environmental strategy of continuously reducing emissions. Even through the company fell short of the envisaged CO₂ reduction of 5% by 4% and has therefore not met its self-imposed targets in terms of emissions. One factor diminishing this success has proven to be the slightly increased total fuel consumption, to which primarily the longer routes have contributed. So called “trans voyages” – voyages from one deployment area to another play a key role in this context. In contrast, the especially low average sulfur content in fuel of merely 1.25% is a pleasing development.

Responsibility through self-imposed commitments

The Paris Climate Agreement of December 2015 is a clear commitment by the international community of nations to climate protection and has an especially far-reaching signal effect for the industrial nations. It calls for the temperature increase from global warming to be limited to below 1.5°C. As a successor agreement to the Kyoto Protocol, it makes it necessary to almost decarbonize the economy by 2050 in order to achieve this target. Against this backdrop, TUI Cruises regrets that, in the wake of the Paris Climate Agreement, no specific CO₂ reduction targets have been agreed by the International Maritime Organization

102 TONNES

of CO₂ are being saved at TUI Cruises by the introduction of the employee mobility concept Mobil.Pro.Fit. and implementation of the corresponding measures.

1,334 TONNES

is the amount from business flights that TUI Cruises has offset. The sum of money from CO₂ offsetting is providing support for a solar power station in the Dominican Republic and hence sustainable energy generation.

(IMO) for international shipping. The company has therefore set its own CO₂ reduction target for 2025 of 40% compared with 2015, by which it will be judged.

Thanks to its own far-reaching initiative, TUI Cruises also regards itself as well prepared for the EU MRV regulation, which is due to enter force shortly. With the aim of achieving a 40% reduction in greenhouse emissions by the year 2030 compared with 1990, the EU Parliament and Council drew up a system for the monitoring, reporting and verification of CO₂ emissions in mid-2015, which will provide a binding regulation for future CO₂ reporting for shipping. As from 2018, all vessels larger than 5,000 gross tonnage calling at any European port will be required to have comprehensive CO₂ monitoring. By August 2017, shipping companies will have to submit a corresponding monitoring concept for each of their vessels to an accredited inspection body. TUI Cruises is working together closely with the Global Marine

”

We have also equipped the latest addition to the fleet with a combined exhaust gas treatment system for reducing emissions. An additional focus remains on optimizing the energy need.

“

Georgios Vagiannis
Project Manager Newbuild

department of RCL & Celebrity Cruises on this matter, and even today is already recording comprehensive data such as fuel consumption and quality, distance covered, speed and capacity utilization per day and voyage.

Exhaust gas purification sets standards

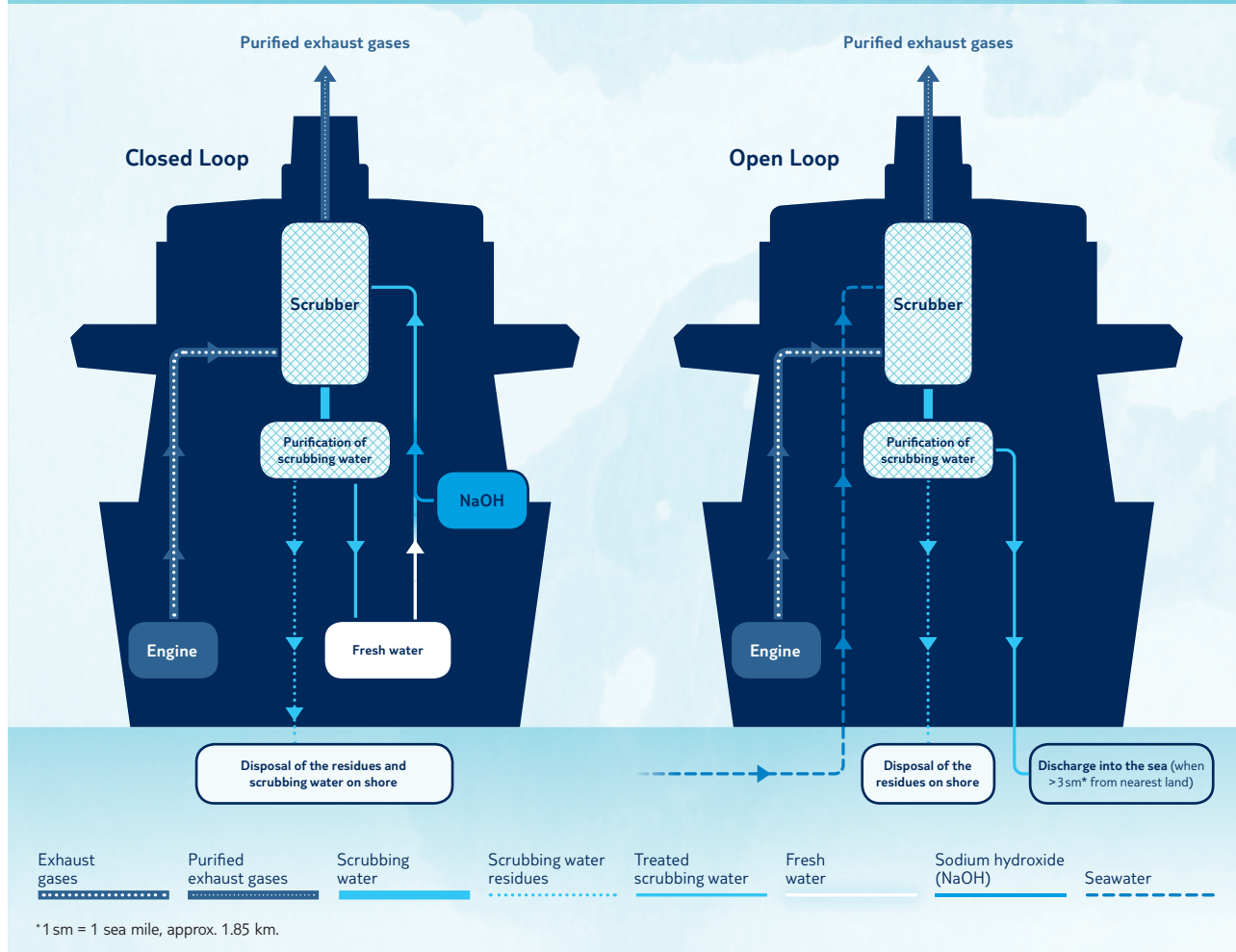
As a complete avoidance of heavy fuel oil is currently not realistic, TUI Cruises continues to rely strategically on the principle of exhaust gas cleaning and has been using this technology since the first newbuild. Its benefits have been apparent since *Mein Schiff 3* entered service in the year 2014 by the exhaust gas standards which today already lie above the values that will become mandatory as from 2020. TUI Cruises occupies a pioneering role within the industry and not just in terms of the function of the modern hybrid scrubbers and SCR catalytic converters. The company is also setting benchmarks with regard to its operations. The scrubber is in operation worldwide and around the clock on all *Mein Schiff*® newbuilds on a voluntary

By deliberately adjusting speeds, TUI Cruises succeeded in reducing fuel consumption and hence emissions on its route planning for the year 2016.



EMISSIONS

Comparison of the scrubber operation in closed-loop and open-loop



basis – not only in the designated special emission control areas of the North and Baltic Seas, the English Channel and North America but also in the other areas that TUI Cruises travels to, such as the Mediterranean, Orient, Caribbean and Central America.

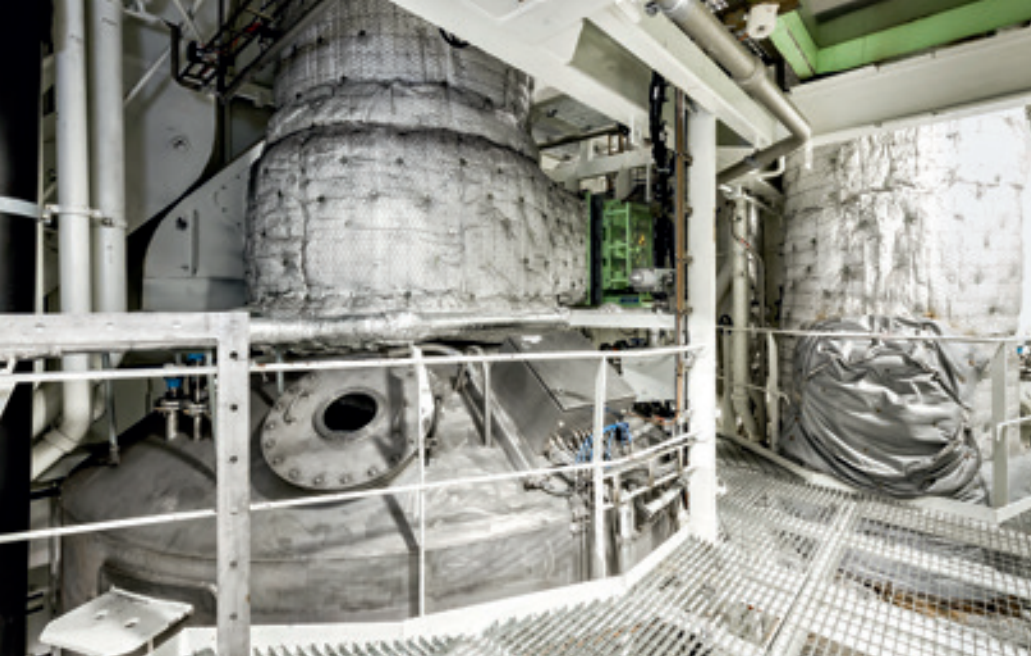
Continuous scrubber operation

On all the newbuilds to date as well as those hitherto planned, TUI Cruises relies on a hybrid scrubber for reducing sulfur emissions. With its two functional modes, the scrubber is the best system currently available to guarantee especially low-emission shipping opera-

tions within particularly sensitive ecosystems. In the mode known as open loop, the scrubber sucks up seawater in order to clean the exhaust gases. After the removal of sulfur from the exhaust gases, residues are filtered out of the seawater and it is discharged into the sea outside of the three-nautical-mile zone. In the closed loop operating mode, the scrubber uses freshwater to clean the exhaust gases. The addition of sodium hydroxide leads to a chemical reaction in the scrubber during the desulfurization process in which the sulfur particles and other pollutants are bonded within the scrubber water. The used scrubber water then

1,950 SQUARE METERS

is the area of the outer hull of *Mein Schiff 2* that TUI Cruises treated with a new underwater coating while it was in the dock in autumn 2016. This coating reduces the resistance of the hull in the water and thus contributes to a reduction in fuel consumption.



A key component of the exhaust gas treatment process: the scrubber cleans the exhaust gases and thus reduces sulfur emissions by 99%.

also undergoes treatment and, together with the residues in the form of sludge, is disposed of exclusively on shore by TUI Cruises.

Focus on commuting routes and business trips

During the reporting year, TUI Cruises attached particular attention to the environment-friendly mobility of its employees. Following a review of the current situation and needs analysis, a comprehensive mobility program with short-term and long-term measures was developed. The main issue in the Mobil.Pro.Fit concept is to reduce emissions generated by the employees' commuting and business trips. In order to optimize this level of emissions, TUI Cruises conducted an employee survey with an analysis of their place of residence. It then realized the potentials revealed by implementing measures such as promoting use of the public transport network and rail discount cards. An offer of company bicycles is also being reviewed in this connection. In addition, the company created a section called "Nachhaltig Unterwegs" [Sustainable Travel] on the intranet in which it provides employees with information on offers of sustainable mobility, ranging from the ProfiCard for employees from the HVV (the Hamburg public transport network) through to car sharing schemes.

TUI Cruises also revised its business travel guidelines in 2016 and included a sustainability clause. This, for example, contains the principle that rail travel should have priority over flights for inner-German trips. Apart from training courses in safe driving and fuel saving for company car users, the currently pending measures within the Mobil.Pro.Fit program also include the introduction of a bicycle-leasing concept.

By taking part in Mobil.Pro.Fit and introducing company mobility management,

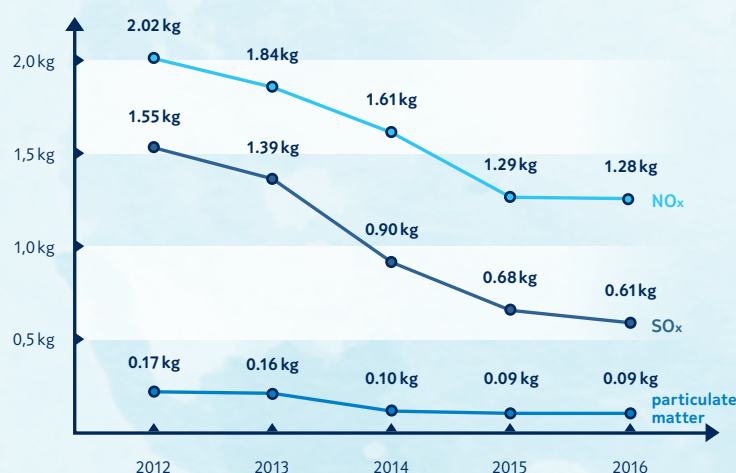
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For TUI Cruises it is self-evident to have the scrubber in operation worldwide and around the clock and not just in the special emission control areas.

“

Lucienne Damm
Senior Environmental Managerin

ATMOSPHERIC POLLUTANTS (NO_x, SO_x and particulate matter) per person and overnight stay, trend from 2012 to 2016



TUI Cruises has qualified for membership of the “Partnership for air quality and low-emissions mobility” organized by the city of Hamburg. As a member, the company is committed to reducing pollutant emissions as part of its corporate mobility management. Since climate protection, above everything else, means reducing emissions harmful to the climate, business flights by employees are a key issue within the framework of sustainable mobility management. In addition to reducing flights to an unavoidable minimum, offsetting the CO₂ emissions resulting from employee flights also plays a key role. For five years now, TUI Cruises has been compensating for all business flights. During the reporting year, employees flew 12,247,653.08 km, causing 1,344.14 t of CO₂ as a result. Via the non-profit organization Myclimate, TUI Cruises ensures that the same quantity of CO₂ is compensated through accredited climate reduction projects. For the reporting years, this was achieved through support for a solar power station in the Dominican Republic.



Advances in the reporting year

In 2016, TUI Cruises...

- was not able to reduce fuel consumption per person per overnight stay compared with the previous year due to the longer overall routes covered.
- again reduced the CO₂ emissions from fuel consumption and refrigerant use on board per person per overnight stay, but did not achieve the target it had set itself of – 5 %.
- achieved a significant reduction in SO_x emissions per person per overnight stay of just under 10 %, which was, however, below the self-imposed target of 15 %.
- managed to reduce NO_x emissions and particulate matter continuously as planned.
- achieved the target of a sulfur content below 2 % with the very low average sulfur content of 1.25 % in the fuel.
- successfully compensated for all CO₂ emissions resulting from business travel.

38.87 PERCENT

was the average proportion of the operating time spent in port by a ship of the Mein Schiff® fleet. With its route scheduling geared towards longer lay times in ports, TUI Cruises is continuously reducing fuel consumption.

3,313 KILOGRAMS

of refrigerants were used on board the Mein Schiff® fleet for air conditioning and other cooling systems. During the reporting year, TUI Cruises completed the conversion process for Mein Schiff 1 and Mein Schiff 2 from R22 to the environment-friendly refrigerant R134a. The new chlorine-free refrigerant has no harmful effect on the ozone layer.

EMISSIONS

Key figures

Energy:

	2015	2016	+/- Previous year
Energy (fuel) consumption on board*	79,399.95 t	101,626.76 t	+ 27.99 %
Thereof, heavy fuel oil	65,422.04 t	90,102.73 t	+ 37.73 %
Thereof, sulfur-reduced heavy fuel oil**	3,960.11 t	0.00 t	–
Thereof, marine gas oil***	10,017.80 t	11,524.03 t	+ 15.04 %
Fuel consumption per person per overnight stay	19.42 kg	19.63 kg	+ 1.07 %

Emissions:

CO ₂ emissions (from use of fuel and refrigerants on board)*/****	258,765.3 t	325,257.22 t	+ 25.70 %
CO ₂ emissions per person per overnight stay	63.30 kg	62.83 kg	– 0.74 %
NO _x emissions per person per overnight stay	1.29 kg	1.28 kg	– 0.43 %
SO _x emissions per person per overnight stay	0.68 kg	0.61 kg	– 9.78 %
Particulate matter emissions per passenger per overnight stay	0.09 kg	0.09 kg	– 1.06 %

* Increase in absolute values due to growth in fleet. | ** Heavy fuel oil with a maximum sulfur content of 1 %. | *** Marine gas oil with a maximum sulfur content of 0.1 %. | **** 1 t heavy fuel oil is equivalent to approx. 3.17 t CO₂. | Differences may occur due to rounding.



WASTE



TUI Cruises is continuously working with numerous measures to avoid waste and improve the rate of recycling in the long term.

Responsibility for the avoidance and recycling of waste.

A responsible approach to the topic of waste continues to have the utmost priority for TUI Cruises. Consequently, we are involved in numerous measures on board the ships as well as through our membership in the organization Futouris e.V.

For TUI Cruises, the aim of all activities connected with the topic of waste is to avoid waste and to systematically and fully utilize all the existing potential for doing so. This includes reducing packaging and increasing the rate of recycling in terms of reutilizing materials and heat.

Strict waste management on board

TUI Cruises has strictly regulated the handling of waste on board in order to comply with the International Convention for the Prevention of Pollution from Ships – or MARPOL for short. On all vessels, the Environmental Officer is responsible for the disposal and discharge of waste being conducted in line with the regulations. The core duties of Environmental Officers include the planning, execution and monitoring as well as the documentation of waste disposal

”

Our project for avoiding food waste is intended to provide stimuli for the cruise industry as a whole. Consequently, we shall of course be making the results of the investigation available to the entire sector.

“

Lucienne Damm
Senior Environmental Managerin

in the ports. They also ensure that, apart from pulped food residues, no waste of any kind goes overboard.

Furthermore, TUI Cruises has installed a modern waste treatment system on all new-builds which, together with the systematic waste management and waste avoidance measures, has reduced the quantity of waste on board.

Focus on food waste

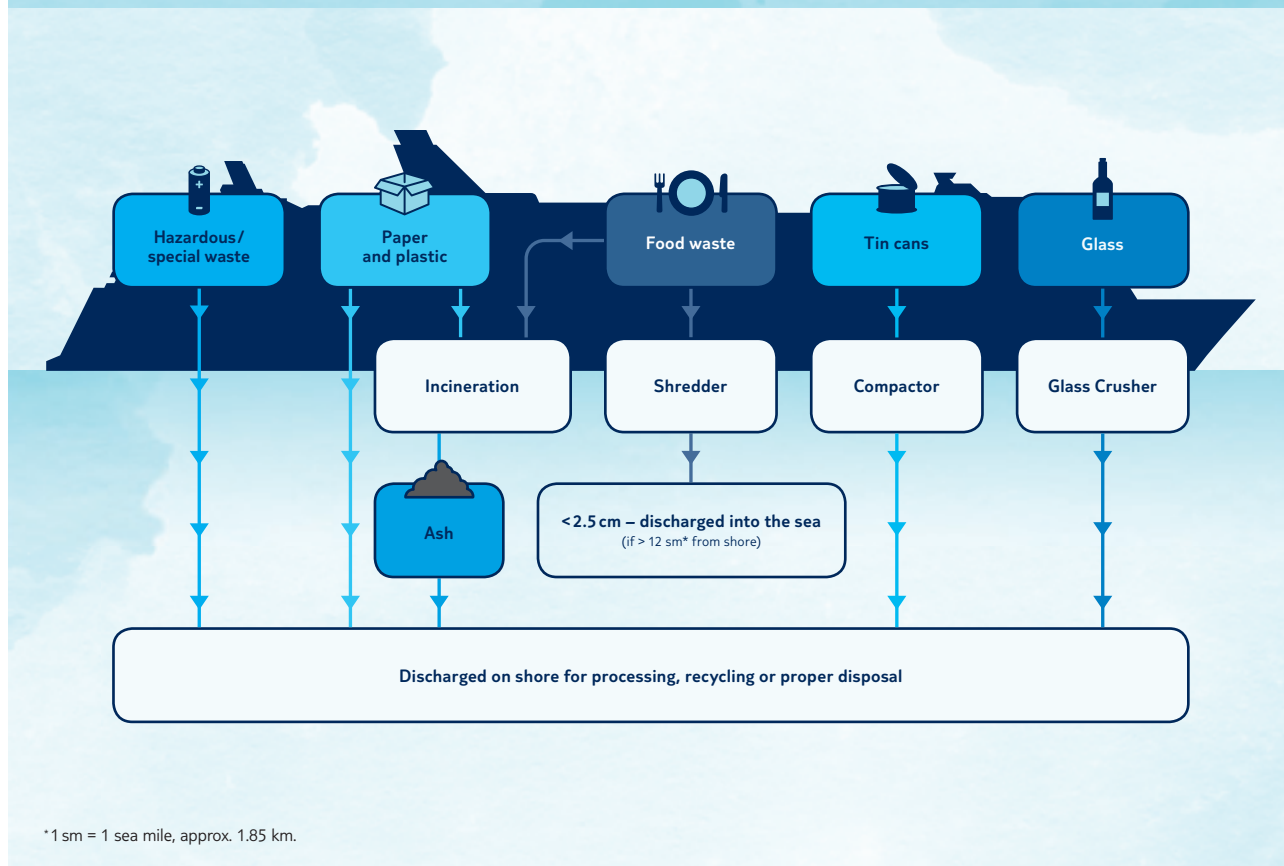
In the reporting year, TUI Cruises placed a special focus on the issue of food waste through the launch of the project supported by Futouris entitled “Food Waste – Reduction of food waste on cruise ships”. The aim of the pilot project is to make efforts to tackle the tremendous waste of food around the world. The project launched in September 2016 has

The sludge produced during treatment of the fuel is collected on board, pumped ashore in the port, where it is disposed of properly.



WASTE

The waste channels on board



WASTE

Key figures

	2015	2016	+/- Previous year
Total waste	37,248.61 m ³	4,634.49 m ³	+ 25.20 %
Thereof, disposed of as residual waste disposal	11,246.43 m ³	15,425.98 m ³	+ 37.16 %
Thereof, incinerated	9,343.71 m ³	12,364.68 m ³	+ 32.33 %
Thereof, reduced to small pieces	5,207.79 m ³	7,047.40 m ³	+ 35.32 %
Thereof, subject to special waste disposal	838.71* m ³	286.42 m ³	- 65.85 %
Percentage of total waste recycled**	24.35 %	24.68 %	+ 1.36 %
Waste per person per overnight	9.11 l	9.01 l	- 1.14 %

* Correction to the value reported in 2015 due to improved availability of data.

** Recycled to yield material and heat. | Differences may occur due to rounding.

a duration of 18 months, during this time the causes of food waste on board the *Mein Schiff*® fleet will be identified with the aid of the project partner United Against Waste e.V. and processes relevant for reducing food waste will be optimized. After the first analysis phase on board *Mein Schiff 4*, TUI Cruises is working with United Against Waste e.V. and Futouris in a second project phase to develop specific measures from the results and is set to conduct trials of these measures on board as from the summer. These measures are intended to organize the processes involved in the preparation, presentation and disposal of food on board more efficiently. The aim is to use the resources employed to the best possible effect, reduce the consumption of resources and food waste as well as create awareness for this topic amongst the crew and guests. The company will then prepare a catalogue of actions from the final results and carry out targeted training for the employees on board. TUI Cruises will implement the effective measures within the entire *Mein Schiff*® fleet.

The results of the project will be published via Futouris and thus made available to the cruise industry as a whole. This will enable far-reaching stimuli to be given in the form of specific proposals for measuring food waste and best practice measures for reducing waste. This is intended to promote greater sustainability in managing food on cruise ships.

Optimum waste treatment during dry dock projects

In the reporting year, TUI Cruises also had its eyes firmly on the handling of waste during the periods spent in dock by

Mein Schiff 1 in Bremerhaven and by *Mein Schiff 2* in Valletta. At each location the Environmental Department together with the Environmental Officer and ten members of the crew planned and monitored the proper separation and disposal of waste generated. It then informed all the contractors working on board of the treatment of waste while the ships were in dock. The company thus ensured that the different types of waste were gathered and sorted centrally and thus underwent the best possible preparation for subsequent utilization.

Waste-to-energy inspection

During the reporting year, TUI Cruises was able to demonstrate that its responsibility for optimized treatment of waste generated does not stop at the ships' railing, by actions such as the auditing of a waste disposal company with respect to a 100% repurposing rate. At the forefront of the inspection of the recycling and waste incineration plants at Palma de Mallorca were the monitoring and proper utilization of the heat and materials from the ships' waste, which were successfully confirmed by the inspection.



Advances in the reporting year

In 2016, TUI Cruises...

- increased the recycling rate by 1%.
- lowered the quantity of waste per person and overnight stay by 2%.
- audited a waste disposal company by inspecting the plant in Palma de Mallorca.
- included a sustainability clause in the General Terms and Conditions of Business in order to reduce packaging waste.

IN **2016**

employees of TUI Cruises again took part voluntarily during their leisure time in the anti-litter scheme "Hamburg räumt auf". All around the company location at Anckelmannplatz, they gathered waste and handed it over to the city cleansing department of Hamburg.



15–25 PERCENT

of ready-to-use food is lost according to a study by the WWF conducted at major-consumer level – in Germany, this amounts to approx. 3.4 million tonnes per year. This is also one reason why TUI Cruises launched a project to avoid food waste on board in 2016.

GARBAGE RECORD BOOK

On every ship this documents the disposal of the various types of waste on board as well as the precise quantities unloaded in the ports for the authorities.



B I O D I V E R S I T Y



Biological diversity comprises the diversity of ecosystems, diversity of species and genetic diversity within the species. The need for conserving and protecting biodiversity is one of the fundamental convictions from which TUI Cruises derives its tangible environmental targets.

Conserving diversity.

From measures for avoiding the introduction of species into alien ecosystems to the protection of endangered animal species such as corals and whales, TUI Cruises contributed to the conservation of biodiversity on the high seas and in the global destinations in a variety of ways in 2016.

The use of ballast water, which is pumped in and out as required, is indispensable for the safe and efficient operation of ships. However, it does represent a fundamental hazard for maritime ecosystems as sea-going vessels travel to all areas of the planet and, by taking up ballast water in one location and discharging it in another, are able to promote an invasion of species into alien ecosystems. Such invasive species generally have no natural enemies in the new habitats and spread very rapidly. This may have negative consequences for an ecosystem in terms of ecology, economics and health. In order to prevent this, the IMO has drawn up a set of

regulations for the mechanical, chemical and physical treatment of ballast water, which enters force in September 2017. With the ballast water treatment plants located on board and the management plan, TUI Cruises already meets the standard demanded by the IMO. All newbuilds have a ballast water treatment plant in which the ballast water undergoes physical and mechanical treatment. To achieve this, the company is using a combined system that comprises a filtration plant for filtering solids and larger marine organisms, such as mussels and crabs, as well as a UV irradiation unit for disinfecting the water and thus eliminating the tiniest

120 YEARS

is how long the ballast water technology has been in use, which is responsible for improving the lateral stability of ships in the water and compensating for changes in weight due to fuel and water consumption.

8 SEPTEMBER 2017

is the date on which the International Convention for the Control and Management of Ships' Ballast Water and Sediments by the IMO comes into force. TUI Cruises already meets all the conditions.



*The association Pottwale e.V. at work:
Talks held at schools and whale-watching
excursions for schoolchildren raise aware-
ness for the conservation of sperm whales
that live off of the coast of Dominica.*

66,140 EUROS

*is the amount of support from the
Green & Fair donations program which
TUI Cruises handed over to Pottwale
e.V. as a contribution to research and
conservation of the habitats of the
Earth's largest toothed animal, the
sperm whale.*



*As the largest animals on Earth,
whales represent an especially im-
portant link in the food network and
one that needs to be protected.*

4 ENVIRONMENTAL ORGANIZATIONS

*received support from TUI Cruises
through the Green & Fair shore ex-
cursion program in the summer 2016
and winter 2016/2017 seasons. The
focus for all organizations is on the
field of marine conservation.*

organisms. This optimum combination en-ables chemicals to be avoided entirely in the treatment of ballast water. TUI Cruises has retrofitted *Mein Schiff 1* and *Mein Schiff 2* with a similar system. A detailed ballast water management plan on board all ships describes the specified procedure.

Sustainable coral conservation

Many species of coral are threatened by ex-tinction due to the destruction of their hab-itats, which is leading to a loss of diversity in species and to a deterioration of ecosystems. In collaboration with zoo aquaria, scientists and local lobby groups, the non-profit founda-tion SECORE International ("Sexual Coral Reproduction") is pursuing new procedures in nature and species conservation and is making efforts to find innovative strategies to recultivate coral species threatened by extinction and to restore the functionality of coral reefs. One of the SECORE projects, with which TUI Cruises has been involved since 2012, is coral conservation off of the coast of Curaçao. In addition, TUI Cruises and SECORE as part of the collaboration with Futouris e.V. have developed a cam-paign on the subject of sustainable snorke-ling and diving within the coral conservation project. All over the world, inattentive or unwitting visitors cause severe damage to coral reefs and have had an alarmingly ad-verse affect on their condition. Against this backdrop, the campaign provides targeted information for tourists on excursions and trains local diving schools and their guides in the Caribbean. TUI Cruises has integrated a

Code of Conduct into its contracts with the diving schools, which lay down sustainable diving standards. The campaign entitled "Sustainable under water" focuses the awareness of tourists and local divers on sustainable conduct during the dives and thus promotes environmentally acceptable dive trips. As a result, it makes an additional contribution to the SECORE recultivation projects for coral conservation.

Cooperation for whale protection

During the reporting year, TUI Cruises cooperated with several environmental pro-tection organizations, whose campaign goals include the conservation of whales. Through donations from the Green & Fair excursions, for instance, the company again supported the organizations MEER e.V. and Pottwale e.V. The latter organization mainly uses the donations for information activities for the population on Dominica and, in particular, the newly created Marine Education Pro-gram, which is particularly aimed at children. In 2016, TUI Cruises also successfully con-tinued its important awareness campaign on whale conservation for guests. As part of its more than two-year collaboration with the International Fund for Animal Welfare (IFAW), the company created a flyer called "Meet us don't eat us", which informs guests on the Nordic routes about the threat pre-sented to whales and the concerns of con-suming whale meat.

In the summer of 2016, the subject of whale conservation featured strongly in



the media in connection with whaling on the Faroe Islands, a destination which TUI Cruises served once during 2016. TUI Cruises expressly distances itself from worldwide whaling. If the company encounters practices that raise concerns about species protection at its destinations, it consistently seeks a dialogue with the authorities, environmental protection organizations and its local partners. This was also the case in connection with the whaling on the Faroe Islands, which was criticized most strongly by TUI Cruises. In a meeting held at the destination, TUI Cruises was able to convince itself that the company's tourist attractions on the Faroe Islands had nothing to do with whaling and will continue to actively inform its guests on the route about the local situation and thus create awareness of what is happening in the region.



Advances in the reporting year In 2016, TUI Cruises...

- successfully extended its range of sustainable shore excursions in Central America.
- drew up an information catalog with ecological and cultural notes for various destinations, with which speakers on the ships were able to supplement their geographical talks.
- compiled and implemented a blacklist for the protection of endangered species on the menu, which is continuously undergoing further development in collaboration with the service provider sea chefs.
- closely examined all products used on board for any microplastics contained and explored the possibility of introducing more environment-friendly alternative products.

12 SPECIES OF FISH

including bluefin tuna, shark, mud shark, whale meat and cod from the Baltic Sea are on the blacklist that TUI Cruises employs to prevent endangered species being served up in meals on board.

TOP 3

In the GreenTec Award 2017 the campaign developed by TUI Cruises and SECORE for the protection of corals was among the top 3 nominated in the category of sport. The winner will be announced at the GreenTec Gala in Berlin in May 2017.



WATER



Whether it concerns active marine protection, comprehensive wastewater treatment or the disposal of wastewater in the port, an sparing and resource-conserving approach to managing what is the most essential element for the company is of crucial importance to TUI Cruises.

Saving and protecting: careful management of water.

Marine protection is one of the main sustainability targets of the United Nations (UN). TUI Cruises is embracing this global project in a tangible manner and during the reporting year also implemented numerous measures to protect the seas.

UN sustainable development goal 14 involves the conservation and sustainable use of the oceans, seas and marine resources. By 2020, the aim is for the oceans to be sustainably managed, and for pollution within them to be significantly reduced by 2025. TUI Cruises is committed to this goal and is supporting its implementation through targeted measures. Examples of these are comprehensive wastewater treatment systems for the entire fleet, the self-imposed obligation to not discharge any untreated wastewater into the sea and the zero-discharge target for pulped food waste. In order to increase the previous extend to 100%, TUI Cruises will further raise the efficiency of its drying systems for food waste, thus enabling the incineration process to be optimized.

Wastewater treatment is marine protection

The section on Emissions contains a detailed description of the closed-loop operating mode that TUI Cruises uses voluntarily in the whole of the Baltic Sea on its newbuilds equipped with a scrubber. This is also a measure to protect the oceans and seas, as disposal of the scrubber water produced during the exhaust gas treatment takes place on shore. Like all newbuilds *Mein Schiff 5*, which entered service during the reporting year, is also equipped with a Wastewater Purification System (AWP) for treating all the effluent generated on board (see diagram on p.29). In this system, the wastewater from the various collection and generation points on board is fed into a mixing tank. After the mixing process, larger solids and impurities, such as plastic or paper, are

88 PERCENT

of the operating time for Mein Schiff 4 in summer 2016 was in closed loop mode, in which disposal of the residues and scrubbing water from exhaust gas treatment takes place exclusively on shore.

2000 / 59 / EC

regulates as the EU port reception facilities directive the disposal of ship-generated waste and effluent. It demands that ports set up suitable infrastructures – so that in future, for example, ship operators are able to dispose of wastewater generated in the Baltic Sea on land without any additional costs.

Reduced volumes of laundry: the use of towel cards enabled the number of pool towels issued to be reduced dramatically.





The White Box is where all the monitoring and control values for the bilge water are recorded. It is secured with a separate lock to protect the data against manipulation from outside.

removed from the effluent in a coarse prefiltration step. The next treatment stage takes place in a bioreactor with the aid of bacteria, which settle on a membrane and break down the organic constituents of the wastewater. Afterwards, the AWP pumps the effluent into a flotation tank. There, the addition of oxygen and polymeric compounds causes the remaining solids to rise to the surface, where they can be skimmed off for subsequent incineration or disposal. The wastewater then passes through a so-called polishing filter, which removes even the ultrafine solid residues. The final purification stage is the UV disinfection to kill all germs and bacteria. At the end of the process, the purified effluent meets very high standards and is either discharged overboard on the high seas, outside the three-nautical-mile zone or disposed of on shore.

... Control is better

TUI Cruises adopts a similarly careful approach to disposing of water from the engine room contaminated with oil. The company discharges this so-called bilge water into the sea exclusively outside of the twelve-mile zone. Prior to this, de-oiling equipment is used to separate the oil and treat the bilge water. Using a multistage monitoring process, TUI Cruises ensures compliance with its self-imposed limit of 5 parts per million (ppm) for water discharged into the sea.

”

Thanks to our voluntary Zero Discharge Standard, which we have defined for the use of our scrubbers throughout the Baltic Sea, we are pioneers for the industry in the handling of scrubber wastewater.

“

Wybcke Meier
Chief Executive Officer
Chairwoman of the Management Board

With this limit, the company is imposing considerably stricter benchmarks than demanded by the internationally binding threshold limit value of 15 ppm.



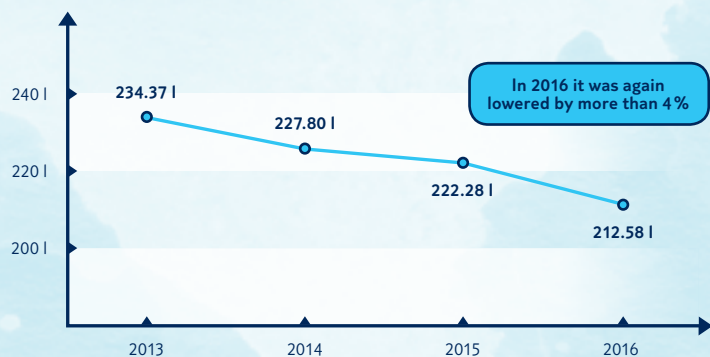
Advances in the reporting year

In 2016, TUI Cruises...

- reduced water consumption per person and overnight stay by 4.36% compared with the previous year and thus surpassed its self-imposed target of a 2% reduction.
- greatly increased the proportion of water purified on board and hence its independence from shore-based water-filling operations, which, especially in areas suffering from a water shortage, can have a negative ecological and social impact.

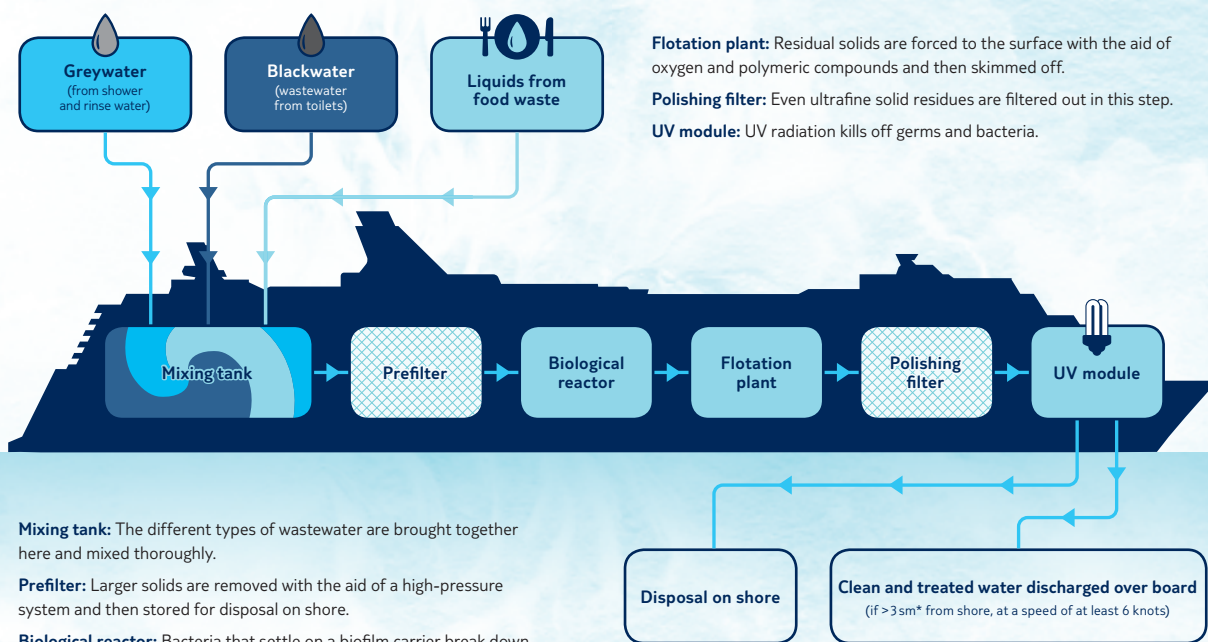
WATER CONSUMPTION

per person and overnight stay, trend from 2013 to 2016



WATER

Wastewater treatment on the newbuilds



Mixing tank: The different types of wastewater are brought together here and mixed thoroughly.

Prefilter: Larger solids are removed with the aid of a high-pressure system and then stored for disposal on shore.

Biological reactor: Bacteria that settle on a biofilm carrier break down the organic constituents in the wastewater.

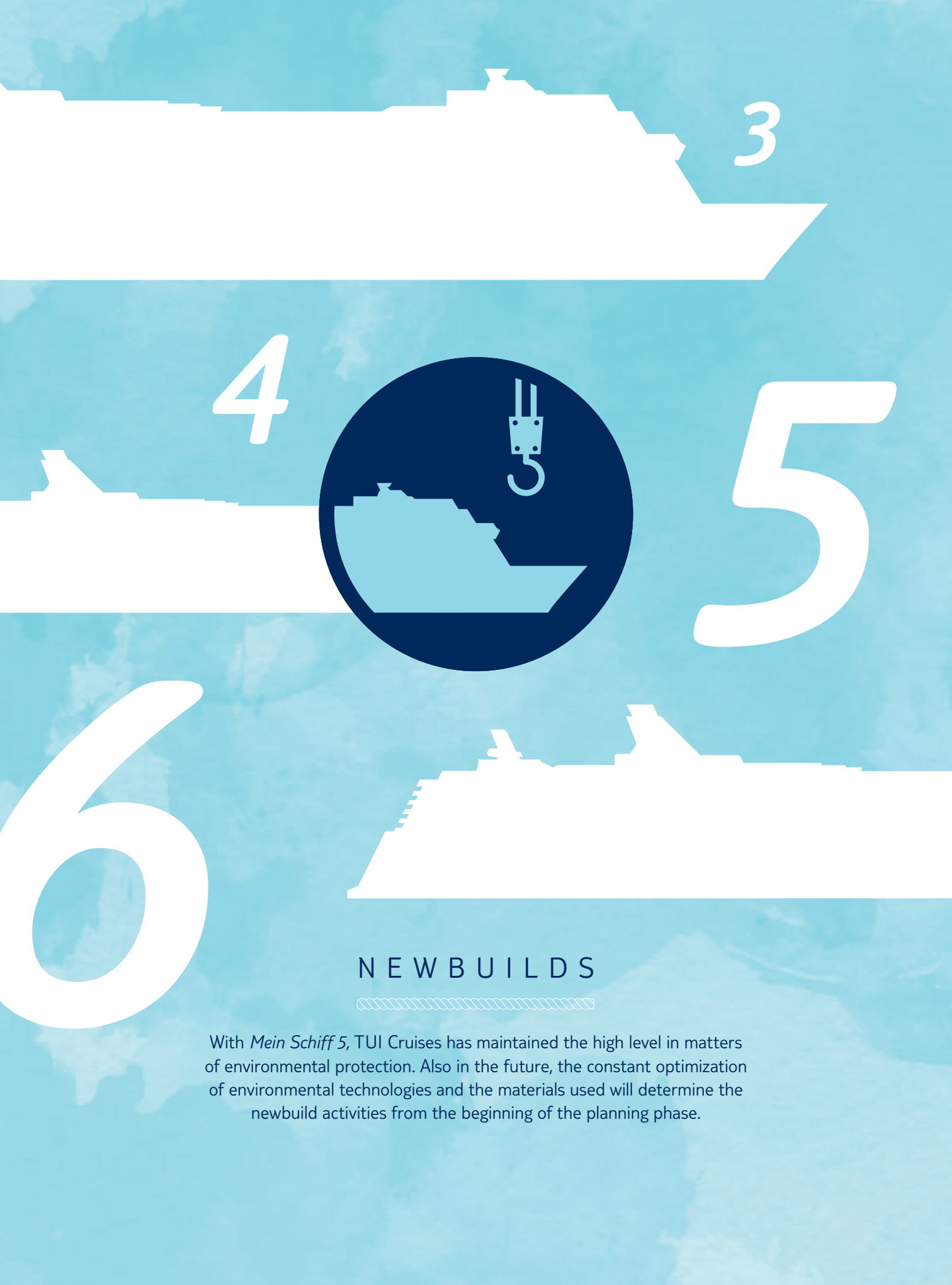
*1 sm = 1 sea mile, approx. 1.85 km.

WATER

Key Figures

	2015	2016	+/- Previous year
Total water consumption*	908,707.58 m ³	1,100,522.70 m ³	+ 21.11 %
Thereof, fresh water consumed	234,967.58 m ³	242,462.70 m ³	+ 3.19 %
Thereof, treated seawater consumed	673,740.00 m ³	858,945.00 m ³	+ 27.49 %
Untreated blackwater**	77.50 m ³	0.00 m ³	–
Untreated greywater**	1,660.00 m ³	1,260.00 m ³	– 24.10 %
Treated greywater and blackwater	832,143.49 m ³	890,490.41 m ³	– 7.01 %
Bilge water, treated	1,756.27 m ³	1,776.85 m ³	+ 1.17 %
Treated greywater and blackwater**		7,313.99 m ³	–
Bilge water, treated**		231.20 m ³	–
Consumption per passenger per overnight stay	222.28 l	212.58 l	– 4.36 %

* Increase in absolute values due to growth in fleet. | ** Disposal on shore. | Differences may occur due to rounding.



3

4



5

6

NEWBUILDS



With *Mein Schiff 5*, TUI Cruises has maintained the high level in matters of environmental protection. Also in the future, the constant optimization of environmental technologies and the materials used will determine the newbuild activities from the beginning of the planning phase.

Setting benchmarks.

From 2014 to 2019, TUI Cruises is putting a newly built ship into service every year. With what will be the last newbuild for the time being, the vision of operating the youngest, cleanest and most modern fleet in the world from 2019, determines the conceptual idea for all new ships.

In 2016, TUI Cruises continued the rapid growth of the fleet at undiminished speed and, with the entry of *Mein Schiff 5* into service in the summer, again set benchmarks in terms of emissions reduction, conservation of resources and energy efficiency. These issues also determine the ongoing work on *Mein Schiff 6*, which is due to be named in June, and on the two sister ships, the new *Mein Schiff 1* and *Mein Schiff 2*, which are due to replace their current namesakes in 2019.

Following its naming ceremony, *Mein Schiff 5* successfully proved itself at sea: on its initial voyages in the Nordic countries and in the Caribbean during the winter season, the exhaust gas treatment system operated smoothly. Together with the other newbuilds, the latest member of the fleet thus ensured that in 2016 TUI Cruises was already surpassing the threshold limit value of a maximum 0.5 % sulfur content in fuel set to become mandatory around the world as from 2020. With its SCR catalytic converters and scrubber technology, *Mein Schiff 5* achieved a comparable maximum sulfur content of 0.1 % in its exhaust gas, like all other newbuilds.

TUI Cruises is heading for the USA

In the reporting year, *Mein Schiff 6* was in the final phase of construction. After its commissioning, it will be the first member of the *Mein Schiff*® fleet to serve the east

coast of the USA. In order to equip ship and crew for the particularly stringent USPH regulations that apply there, TUI Cruises worked together closely with its RCL colleagues in 2016 and will prepare the Environmental Officers assigned to the new route for the especially strict provisions relating to the management of chemicals and waste in US waters and ports. The equipping of all vessels beyond a certain size with environmentally acceptable lubricants (EAL) as specified by the US Environmental Protection Agency for the seawater interface is a measure that TUI Cruises has already implemented on *Mein Schiff 5* and *Mein Schiff 6*. In addition, attention continues to be directed towards the use of ecological materials in newbuilds – one example of this is the increasingly extensive fitting of the Kids area with floor coverings made of natural raw materials and free of PVC, chlorine, plasticizers and solvents.



Advances in the reporting year

In 2016, TUI Cruises...

- undertook comprehensive measures to prepare *Mein Schiff 6* for the USPH requirements.
- equipped *Mein Schiff 5* and *Mein Schiff 6* with environment-friendly lubricants in the outside areas in contact with the water.
- used environment-friendly floor coverings for the Kids areas.

5,788 GUESTS

is the number that the new *Mein Schiff 1* and new *Mein Schiff 2* will be able to accommodate. Along with *Mein Schiff 6*, they are currently under construction and will enter service in 2018 and 2019 respectively.



© Stefan Pielow

USPH

stands for United States Public Health Service. The regulations by the US authority define aspects such as hygiene standards when dealing with food and are mandatory for all cruise ships traveling in US waters.



COMMITMENT

As a modern and sustainably oriented cruise ship company, TUI Cruises sees itself as responsible for making a voluntary contribution to environmental protection and to social interaction at its company locations and destinations.

Assuming responsibility.

Through donations and participation in various initiatives during the reporting year, TUI Cruises was also involved in many different ways in environmental protection and social issues far beyond the company boundaries.

As a cruise company, TUI Cruises lives from and with the wildlife, the diversity and the people around the globe at its destinations. Against this backdrop, the company relies on various projects and activities to promote ecological and social targets. Since 2016, the company has been working together closely with the TUI Care Foundation. This independent foundation of the TUI Group supports projects that open up new future opportunities for young people, to protect nature and the animal world and to promote sustainable development in the destinations.

A grown link: Futouris e.V.

In 2010, TUI Cruises was the first cruise company to become a member of the sustainability initiative Futouris e.V. in order to join other companies from the tourist industry in a commitment towards improving living conditions, conserving biological diversity as well as protecting the environment and climate at their destinations. The close and constructive cooperation with the sustainability initiative has been intensified further since TUI Cruises Senior Environmental Manager Lucienne Damm was elected to the Executive Board of Futouris in 2015. During the reporting year, TUI Cruises concluded the Futouris sponsorship project on sustainable diving that it had

been conducting together with SECORE since 2013. Following this, the company has been involved in a new Futouris sponsorship project since autumn 2016 entitled "Food waste – Reduction of food waste on cruise ships". The project is described in more detail in the section on waste. TUI Cruises has additionally been supporting the current Futouris industry project "Sustainable Food", which intends to develop a comprehensive practical guideline for food production and processing. This guideline aims to provide targeted support for companies in the tourist industry on the development, implementation and marketing of sustainable offerings.

Local support: sponsored project

Among the activities conducted at local level in the company's own locations is the sponsorship project that has been proposed and selected by TUI Cruises employees every year



50.000 EUROS

is the sum that employees and guests have donated to the local sponsored project, which is selected by employees every year. During the reporting year, the donation went to the association "Freunde alter Menschen e.V.", which aims to protect the elderly from loneliness and isolation.



Freunde alter Menschen e.V.
les petits frères des Pauvres

More than just financial support: Three new visiting partnerships were also arranged between TUI Cruises colleagues and "Freunde alter Menschen e.V."





The World Improver Handbook developed by TUI Cruises uses a play-based but informative approach to bring children into contact with the subject of conservation for the climate, seas and species.

Imparting knowledge

The Science Year 2016/2017 by the German Federal Ministry of Education and Research is dedicated to the subject of seas and oceans. TUI Cruises is supporting the initiative. The company is taking part in the coastal laboratory project and providing a mobile coastal laboratory for children on board. This enables the young guests to obtain all sorts of facts about the North and Baltic Seas, which they can then compare with what they observe on excursions to the beaches at the destinations. In addition, TUI Cruises has developed a "Weltverbessererhandbuch" [World Improver Handbook] which is issued to all children when they check in on board. The handbook contains information prepared in a way suitable for children and using a play-based approach on topics such as species protection and marine conservation, recycling on board and waste in the seas.

Another measure aimed at imparting knowledge was a briefing paper drawn up in 2016 on the subject of elephants as a tourist attraction, in which the sustainability committee of the German Travel Association (DRV) provides information on practices that raise concerns in relation to species protection and offers tourist companies practical principles for identifying services that are kind to elephants. TUI Cruises is represented in the DRV sustainability committee by Senior Environmental Manager Lucienne Damm. On the committee's initiative, the DRV joined the Roundtable for Human Rights at ITB 2016 and signed the Commitment on Human Rights in Tourism.

65 TALKS

on topics such as the environment, animals or natural sciences were organized by TUI Cruises in 2016 as part of its "Kompass – Wissen auf See" [Compass – knowledge at sea] program.



since 2014. In this project, a small regional organization at the Hamburg and Berlin sites receives support for one year from employees collecting money by means of various campaigns on shore and on board the *Mein Schiff*® fleet. Through activities such as raffles on board ship and internal flea markets, the team collected a total of €50,000 for the sponsorship project in the reporting year, namely the association "Freunde alter Menschen e.V.", which combats loneliness and isolation among the elderly. For the current business year, the employees have chosen "Ankerland e.V." as the sponsorship project. The Hamburg-based association offers assistance and support for traumatized children and their families. Apart from counseling and arranging opportunities for therapy, the association is also concerned with raising public awareness of this issue.

3 questions for Swantje Lehnert:



Swantje Lehnert
Managing Director
Projects & Cooperations
at Futouris e.V.



Tourism is very diverse. How important is a joint initiative such as Futouris in this field?

Despite the great diversity within the industry, all companies are confronted by at least similar challenges with respect to sustainability. The collaboration through Futouris means that joint approaches are developed for tackling the problems and best practices can be exchanged between the participants.

Numerous cruise lines are now also members of Futouris. TUI Cruises was the first cruise company in 2010. Why is it important for shipping companies to be represented as well?

We are delighted that the cruise operators are becoming so intensively involved in the Futouris group of members. They are using Futouris to jointly work out solutions for sustainability issues specific to the cruise industry. Yet the collaboration between shipping lines and other Futouris

members is also important. This provides a special opportunity within the Futouris framework for members to broaden their horizons by transferring innovative solutions and learning from one another.

Since the start of autumn 2016, TUI Cruises has been carrying out the Futouris project "Reducing Food Waste". What influence can the project exert?

The aim of the project is to reduce food waste on-board ship. To this end, a first step in 2016 was to carry out an analysis of the quantities of waste on *Mein Schiff 4*. Measures were developed on the basis of the results and then tested on board. The results will then be made available to other Futouris members as well as the whole of the tourist industry. As a result, the project can exert great leverage and has the potential to reduce food waste in the cruise industry as well as the hotel sector.



*Gaining an impression:
During the first on-board
measurement, a lot of data
had to be recorded and
evaluated by the Executive
Chef of Mein Schiff 4 and
Gregor Raimann from
United Against Waste e. V.*

A SELECTION OF OUR OTHER PARTNERS:





Environmental targets.

In order to open its environmental protection efforts to inspection, TUI Cruises formulates specific environmental targets every year. The results for the year's achievements in 2016 are respectable: thanks to intensive efforts in a wide range of areas, the company has implemented more than three-quarters of its own plans.

16 OUT OF 21

self-imposed environmental targets has TUI Cruises met in 2016. Reductions in waste, CO₂ and sulfur emissions were among the areas in which progress was achieved.

70 MEASURES

were defined by TUI Cruises with its specialist departments following the environmental workshops: short-term measures included a blacklist of endangered species for the restaurants and among the long-term measures was the digitization of guest information.

Of the 21 environmental targets formulated for the reporting year, TUI Cruises fully met 16 of them. In four of the others, the company can demonstrate a positive trend slightly below the targeted values. Only in connection with CO₂ emissions, for which a reduction of 1 % was achieved, did the company fall significantly below its target value of a 5 % reduction. The main reason for this was the overall increase in fuel consumption due to the lengthy transit voyages. Against this background, the newbuild effect of *Mein Schiff 5* with its extremely energy-efficient performance was no longer so clearly apparent in the overall picture. The consequences of this for TUI Cruises are, firstly, the need to set a more realistic target for the current year and, secondly, the task of continuing to work constantly on efficient route planning and ship operations.

During the reporting year, TUI Cruises implemented the environmental program included within the framework of ISO 14001 certification almost completely. In this connection, for example, the company switched over its entire business supplies to 100 % recycled paper, conducted several supplier visits focusing on the topic of the environment and implemented all measures from the compulsory energy audit in accordance with the Act on Energy Services and Further Energy Efficiency Measures (EDL-G) at its business locations. For time-tabling reasons one internal specialist training session could not take place on time so that an alternative date will be found in 2017.

Potential for improvement identified

On its way to a continuous improvement in environmental protection, TUI Cruises carried out environmental workshops with the Marketing and Operations departments during the reporting year. In workshops with all departments from the respective specialist areas lasting several hours, the participants worked out the environmental impacts and potential for improvement from their own departments and identified corrective measures. Subsequent sessions were held to reach a binding decision on and document the measures. In view of the good outcome achieved and the resulting increased awareness among employees, TUI Cruises is to continue the workshop format and extend it to other specialist areas.



Keeping an eye on all important indicators: Environmental Officers receive support from EMMA, a software-based energy management system, which supports the ship management team in operating the fleet with the maximum possible energy efficiency.

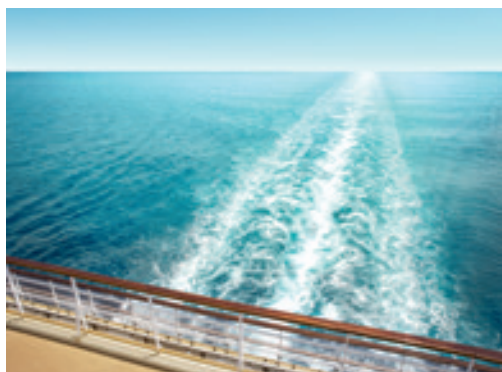
ENVIRONMENTAL TARGETS

TUI Cruises

Area	Target 2017	Deadline
Environmental management	Continue the measures for reducing energy consumption on shore	Ongoing
	Conduct three supplier visits with a focus on environment aspects	End of 2017
	Conduct a stakeholder survey on the topic of environmental protection at TUI Cruises	End of 2017
	Continue the measures for reducing print products and paper consumption	Ongoing
Emissions	Reduce the fuel consumption of the <i>Mein Schiff</i> ® fleet by 2 % compared to 2016	End of 2017
	Reduce the CO ₂ emissions per person per overnight stay by 2 % compared to 2016	End of 2017
	Reduce the SO _x emissions per person per overnight stay by 12 % compared to 2016	End of 2017
	Reduce the air pollutants NO _x and particulates compared to 2016	End of 2017
	Maintain the fuel quality at a mean sulfur content of less than 2 %	Ongoing
	Continue recording and compensating for the CO ₂ emissions caused by business trips	Ongoing
Waste	Increase the proportion of waste recycling compared to 2016	End of 2017
	Reduce the quantity of waste per person per overnight stay by 2 % compared to 2016	End of 2017
	Conduct the project "Reduction of food waste" with a test phase on the <i>Mein Schiff</i> ® fleet	End of 2017
	Audit at least one waste disposal company with respect to a repurposing ratio of 100 % regarding the waste offloaded in the port	End of 2017
Biodiversity	Extend the activities aimed at protecting endangered species on board and at the destinations	Ongoing
Water	Reduce the water consumption per person per overnight stay by 2 % compared to 2016	End of 2017
Newbuilds	Equip the future newbuild vessels with an exhaust gas treatment system	Ongoing
Commitment	Support local environmental organizations through donations generated from the "Green & Fair" shore excursions	Ongoing

This is not an exhaustive list because many smaller and internal environmental targets and measures can not be included here due to reasons of space.

FURTHER INFORMATION



Communicate with us

Any suggestions or criticism? The TUI Cruises Environment Team will be pleased to deal with any feedback and queries you may have concerning this environmental report and its contents. Contact us via: umwelt@tuicruises.com

About this report

Our responsibility does not merely cover the contents and design. It also extends to the production of this environmental report (print version). This is why we have taken the conscious decision to use only **100% recycled paper** for the cover and inside pages. In addition, we have completely refrained from using adhesives (e.g. in the binding and cover design) and have only employed environment-friendly printing inks, which are water-based and free of mineral oils.



This report is also available for download on the Internet at www.tuicruises.com/nachhaltigkeit (also in German).



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