

# COSCO SHIPPING Lines Co., Ltd.

## 2017 Sustainability Development Report



中远海运集装箱运输有限公司  
COSCO SHIPPING LINES CO., LTD.



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# Statement of the General Manager



In 2017, under the leadership of the parent company and the Board of Directors, COSCO SHIPPING Lines seized the precious opportunity of the global economic high-speed recovery and the container shipping business transformation and upgrading, strengthened the reform and reorganization and focused on improving quality and efficiency, which has achieved good economic and social benefits.

During the past year, we never stopped forging a Top-tier Shipping Line and Global Network. By the end of March 2018, the company fleet has reached 374 ships and 1.91 million TEU, ranking fourth in the world. We are expected to enter the top three of the industry and initially achieve our first-tier goal. On April 1st, 2017, the OCEAN Alliance officially launched by operating 41 services and deploying 350 vessels, totally capacity up to 3.5 million TEU and aiming at providing the reliable services with higher frequency, larger scale, wider coverage and quicker delivery. As the member of OCEAN Alliance, COSCO SHIPPING Lines gains the trust from global customers.

We unswervingly promoted the capacity in the emerging and regional market in order to serve our global customers more evenly. We deployed 180 vessels with a total capacity of 1.15 million TEU along the Belt and Road, which contribute to the landing of national initiative.

We fulfilled the "Nine Customer Service Standards" around the world to make our service more normalized. Our on-time arrival percentage and transferring efficiency ranked top among the shipping companies. COSCO SHIPPING Lines actively explored the application of frontier technology such as big data and block chains and created whole individualized and visualized customization service, which have won the high recognition and trust from customers. In 2017, the company's customer satisfaction index achieved new records, leading the whole industry.

We are committed to promoting the integration of resources across the entire shipping industry and constantly improving the capabilities of whole logistics solution. The company's independent Sino-Russia Railway Express operated successfully and the project on the waterless -East Gate of Horgos, Kazakhstan completed successfully.

We are committed to practicing the green development concepts by reducing fleet fuel consumption effectively and implementing energy saving and emission reduction, making contribution to the global environment protection.

We built a broad development platform for our employees and promoted mutual improvement between employees and enterprise. We have conscientiously fulfilled our social responsibilities, rewarded the society with practical actions, and actively participated in the precise poverty alleviation in Shanghai, Yunnan and Liaoning, gaining widespread praise.

Looking ahead to 2018, the global economy will continue to recover while uncertainties and instabilities still remain. We will seize the day and forge ahead, and make unremitting efforts to create values for our customers, shareholders, employees and society.

We will consistently shoulder the glorious mission of the global carrier and go for Top-tier Shipping Line and Global Network, to build a better global service system.

We will consistently focus on customers, integrate global high-quality resources, and insist on the intelligent shipping exploration, to enhance customer experience at a higher level.

We will consistently promote the construction of environment-friendly enterprise and the development of green shipping, to jointly protect our planet.

We will consistently establish the concept of safety development, and apply the principle of "Life and Safety First" to every steps of operation and production.

We will consistently care for our employees, so that the employees can achieve a higher life value in the process of enterprise development.

We will consistently take social responsibility and more accurately combine the realities of the poverty-stricken areas with the advantages of the enterprise resources to enhance the effectiveness of poverty alleviation and achieve a win-win situation.

"If one can make things better for one day, he would make them better every day." In 2018, COSCO Shipping Lines will continue promoting the navigation spirit of solidarity, remembering the mission of value creation, and stepping forward to achieve the goal of building a top-tier liner company with international competitiveness!

# About the report

## Reporting period covered

January 1st to December 31st, 2017

## Release cycle

The Sustainable Development Report is released on an annual basis. Last report was released in May 2017, and this report was released in May 2018.

## Guidance

The Global Report Initiative, *The Sustainability Reporting Guidelines (G4)*, according to the principle of "core" compliance.

## Scope

The Report covers the headquarters of COSCO SHIPPING Lines Co., Ltd and 50 subsidiaries in the financial reports. If there are special circumstances, there will be a description of the specific data statistics in the corresponding Chapter.

## Definitions

For the convenience of presentation and reading, in this Report,

"COSCO SHIPPING Lines Co., Ltd." is referred to as "COSCO SHIPPING Lines" or "We";

"China COSCO Shipping Corporation Limited" is referred to as "COSCO SHIPPING";

"COSCO SHIPPING Holdings Co., Ltd." is referred to as "COSCO";

## Data Declaration

The data sources include the public data from the government, COSCO SHIPPING Lines' internal statistical statements, third party questionnaires and interviews. We assure that the content of this report is free from any false records, misleading statements or major omissions. There is no major change on our entity scope in 2017.

## External Assurance

To ensure the accuracy, comparability, timeliness, clarity, and reliability, we specially invite DNV GL management services group as the assurance party of this report.

## Access Channels

You can visit the website of COSCO SHIPPING Lines' website ( [www.coscon.com](http://www.coscon.com) ) to download the electronic versions in both Chinese and English.

## Contact

If you have any questions regarding this report, please email [huangyj@coscon.com](mailto:huangyj@coscon.com), or contact +86-021-35124888 (ext.211550).

# About us

## 1.Our business

COSCO SHIPPING Lines Co., Ltd. is affiliated to China COSCO Shipping Corporation Limited (COSCO SHIPPING) and is held 100.00% shares by COSCO Shipping Holdings Co., Ltd. (COSCO).We specialized in the business of international and domestic container shipping and relative business. Our value is "We deliver value". We are a one-person limited liability company and we directly and indirectly owns 50 subsidiaries.

In 2017, our business is growing, industry status is consolidating and service quality is improving. As of the end of 2017, our self-operated fleet includes 360 container ships with a capacity of 1,819,091 TEUs. The container fleet is ranked fourth in the world and Asia first. We operate a total of 355 routes, including 225 international, 44 China coastal routes and 86 Zhujiang Delta and Yangtze River lines. The ships we operate anchor in 267 ports in approximately 85 countries and regions around the world.

The port companies we operate are located in Dalian, Tianjin, Qingdao, Shanghai, Ningbo, Xiamen, South China, Hainan and Wuhan of mainland China; In overseas, we have 9 port companies in North America, Southeast Asia, West Asia, South America, Australia, Japan, South Korea and Africa.

As one of the leading companies in the shipping industry, we actively participate in major international organizations. We are a member of 13 international organizations: Intra-Asia Discussion Agreement (IADA), Transpacific Stabilization Agreement (TSA), Westbound Transpacific Stabilization Agreement (WTSa), Canada Transpacific Stabilization Agreement (CTSA), Canadian

Westbound Transpacific Stabilization Agreement (CWTSa), Informal Rate Agreement (IRA), Asia Australia Discussion Agreement (AADA), Trade Facilitation Agreement (TFA), World Shipping Council (WSC), and World Shipping Council. We are currently a member of 40 domestic organizations, namely: China Navigation Society (Standing Member), Shanghai Traffic and Transportation Industry Association (Vice Chairman), Shanghai Port Trade Association(Vice Chairman), Shanghai Navigation Society (Vice Chairman, Standing Member), Container Transportation Committee of China Navigation Society (Commissioner), China Ship-owners Association (Standing Member, Member), Shanghai Ship owners Association (Standing Member), Shanghai Maritime Exchange Association (Vice Chairman), Shanghai Association of Work Safety (Standing Member), Shanghai Shipping Exchange (Member), Shanghai International Shipping Institute(Vice Chairman), Shanghai International Shipping Center Development and Promotion Organization (SISC-DPO) (Vice-Chairman), Shanghai Information Association, China Maritime Law Association, China Ship owners Mutual Assurance Association (CPI), Logistics Committee of China Traffic and Transportation Association, Shanghai Energy Conservation Association, Shanghai Crime Prevention Academy, Council of Shanghai Labor Security and Shanghai quality management association and collaborative sharing enterprise service. In addition, we have participated in Clean Cargo Work Group (CCWG) of Business Social Responsibility (BSR) and ESI Project.

### Our Shipping Lines business

Revenue	An increase of	The average single-container revenue of international routes	The average single-container revenue of domestic routes
<b>RMB 86.751 billion</b>	<b>RMB 201.73 billion</b>	<b>4,641.34 RMB per TEU</b>	<b>1,632.13 RMB per TEU</b>
We realized a volume of heavy containers of	An increase of	An increase of	An increase of
<b>20,913,700 TEUs</b>	<b>23.73%</b>	<b>12.08%</b>	<b>3.22%</b>

We are committed to create quality routes and provide quality services. In 2017, we have received a lot of recognition from our customers and industries and received many awards:

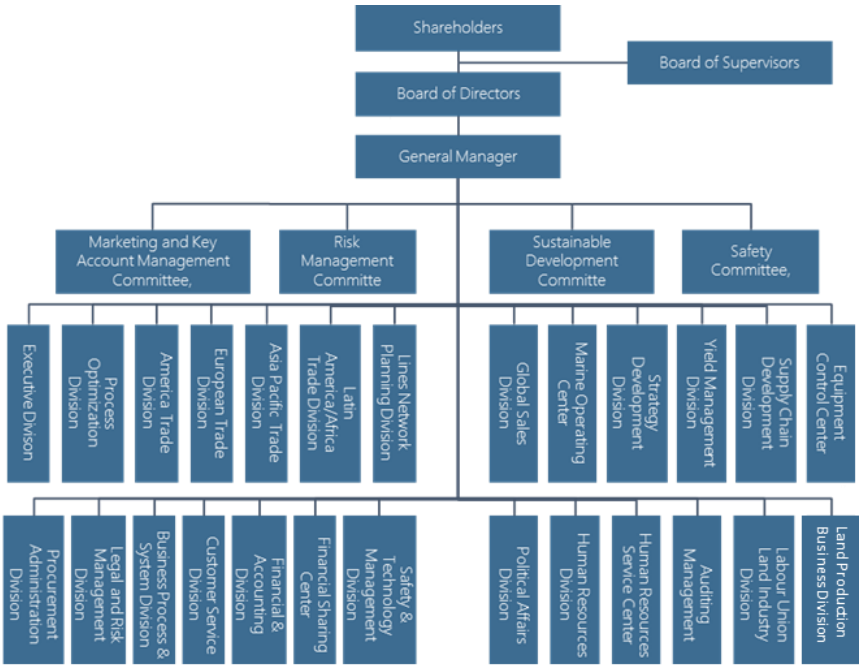
- ❖ 2017-11 Huawei's annual Global Core Supplier Conference (CPC) and Logistics Supplier Conference (LCPC) were held in Shenzhen. At the CPC conference, we were awarded as Huawei's 2017 core carrier. At the LCPC Conference, we won the "Logistics Delivery and Support Award - Logistics Delivery Support" award.
- ❖ 2017-10 Turkey's 12th Shipping Company Service Gold Award
- ❖ 2017-10 US "Logistics Management Magazine" "Service Carrier of the Year" Award
- ❖ 2017-9 Sony "Best Partner" Award
- ❖ 2017-7 "China-Mediterranean liner company platinum award" "integrated service top ten container liner company" "21st Century Maritime Silk Road construction outstanding contribution award" and many other honors
- ❖ 2017-3 PANTOS/LG BEST Supplier of the Year "BEST PARTNER" Award
- ❖ 2017-2 "Taiwan Logistics 2016 Best Cooperative Growth Award"
- ❖ 2017-1 SAIC GM 2016 "Best Supplier" Award
- ❖ 2017-1 FAW-Volkswagen 2016 Excellent Supplier Award

## 2.Establishing a modern enterprise organization structure

We strictly follow the modern corporate system and implement the general manager responsibility system under the leadership of the board of directors. Our operating management consists of a risk management committee, a sustainable development committee, a marketing and major account management committee, a safety committee, and nine non-permanent organizations. It also includes 26 business units and 50 full-fledged joint venture subsidiaries. In the management level, we have set up the positions for Chairman and General Manager. The General Manager is responsible for business development.

For the sustainable development of enterprises, we established the Sustainable Development Committee, consisting of 38

members including general managers, party committee secretaries, and various department heads. They are responsible for researching and implementing the relevant policies and regulations of global contract organizations at all levels, and formulating sustainable development strategies. And objectives, coordinate the implementation of resources for the implementation of the Sustainable Development Goals, review and evaluate the achievement of sustainable development strategies, supervise and inspect sustainable development activities, and approve our annual Sustainability Development Report. Besides, we have assigned a vice manager to manage the sustainable development and report to the General Manager.



## 3.Building a sustainable development system

For the sustainable development of COSCO SHIPPING Lines, we developed corresponding policies and requirements in our container shipping business, in order to set up the standards of quality, environment, safety, and society which become part of our code of conduct.

Sustainable Development System	We established the quality management system, environment management system, occupational health and safety management system and energy management system	GB/T19001-2016/ISO9001:2015 Requirements for Quality Management Systems, GB/T24001-2016/ISO14001:2015 Regulations and Guidance on Environment Control System, GB/T28001-2011/OHSAS18000:2007 Regulations on Occupational Health and Safety Management System, GB/T23331-2012/ISO50001:2011 Requirements for Energy Management System
	We established the social responsibility, risk and internal control management system	ISO26000 Guidance on Social Responsibility, ISO31000 Principles and Guidance on Risk Control, Fundamentals on Enterprise Internal Control issued by the five Ministries of the PRC
	We develop the Social Responsibility Management Manual	ISO26000 Guidance on Social Responsibility, Basic Principles of the Global Compact

## 4. Improving the internal control system

In 2017, we continued to strengthen our awareness of risk management, focusing on prevention, comprehensively strengthening risk and internal control management, and promoting the healthy and stable development of our company. The overall thinking of our risk management work is: Under the unified framework of COSCO SHIPPING's risk work guidance, we should do a good job in risk management from the three dimensions of organization, system, and implementation. We combined the requirements of the new system standards on "risk management concept" and promoted the construction of risk and internal control systems for COSCO SHIPPING Lines and its subsidiaries, and prepared and improved risk identification and internal control requirements prevention guidelines to accelerate the development of integrated systems and internal control requirements. Constraints were extended to all grass-roots units to strengthen the risk identification and assessment of the production and operation frontline, and to create a complete chain of risk

identification, pre-control and remediation, and to implement the requirements and regulations for risk management.

In accordance with the regulations of the company's internal control system, we established comprehensive internal control system and implemented effective internal control activities. The objectives of internal control are to reasonably ensure the legal compliance of operations and management, the security of asset, the truthfulness and completeness of financial reporting, to improve the efficiency and effectiveness of operations, and to promote the realization of development strategies. Evaluating the effectiveness of internal control system and truthfully disclosing internal control evaluation report are the responsibilities of the board of directors. The board of supervisors will supervise the establishment and implementation of internal control system.

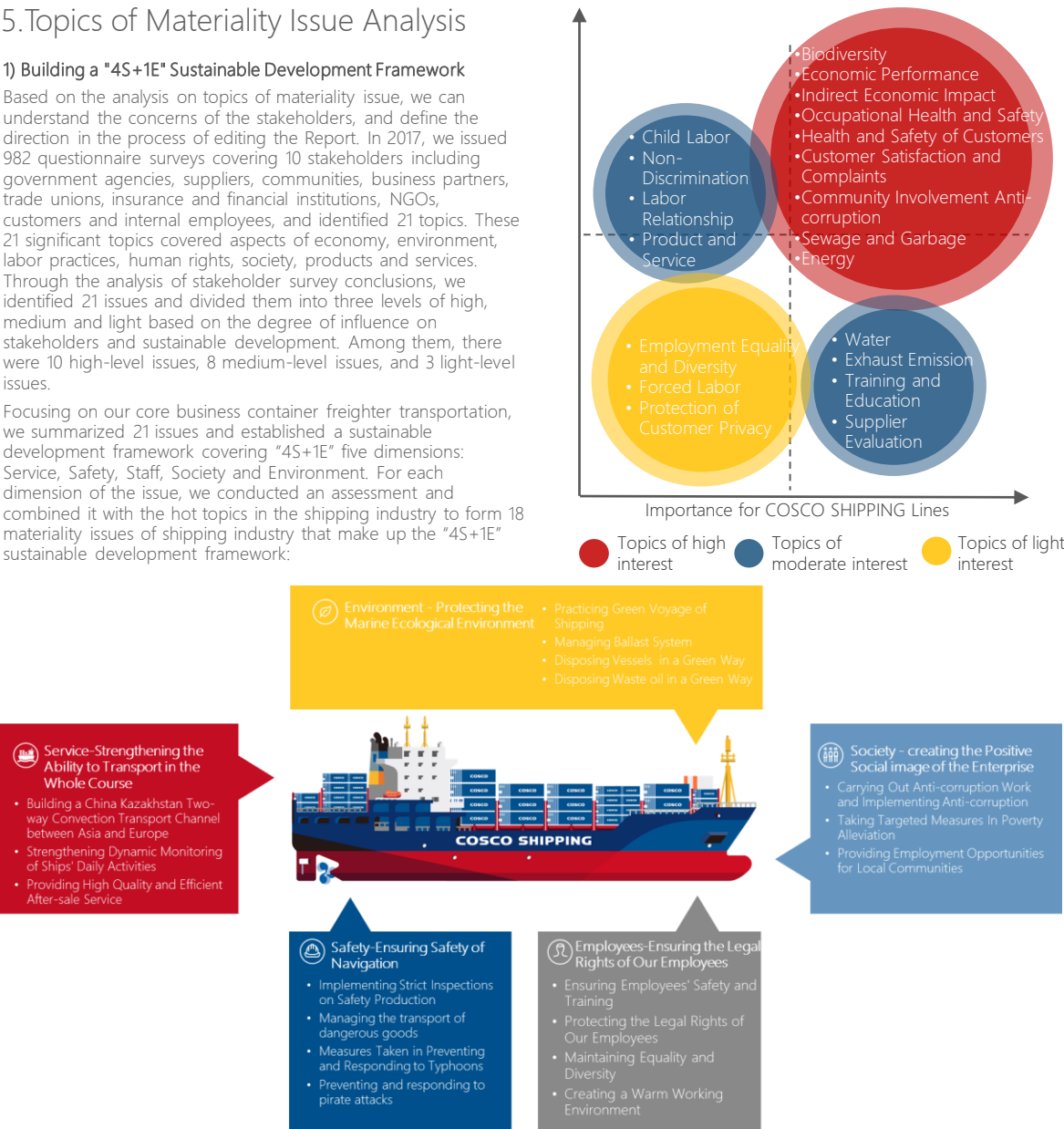


5.Topics of Materiality Issue Analysis

1) Building a "4S+1E" Sustainable Development Framework

Based on the analysis on topics of materiality issue, we can understand the concerns of the stakeholders, and define the direction in the process of editing the Report. In 2017, we issued 982 questionnaire surveys covering 10 stakeholders including government agencies, suppliers, communities, business partners, trade unions, insurance and financial institutions, NGOs, customers and internal employees, and identified 21 topics. These 21 significant topics covered aspects of economy, environment, labor practices, human rights, society, products and services. Through the analysis of stakeholder survey conclusions, we identified 21 issues and divided them into three levels of high, medium and light based on the degree of influence on stakeholders and sustainable development. Among them, there were 10 high-level issues, 8 medium-level issues, and 3 light-level issues.

Focusing on our core business container freighter transportation, we summarized 21 issues and established a sustainable development framework covering “4S+1E” five dimensions: Service, Safety, Staff, Society and Environment. For each dimension of the issue, we conducted an assessment and combined it with the hot topics in the shipping industry to form 18 materiality issues of shipping industry that make up the “4S+1E” sustainable development framework:



In terms of economics, we mainly focus on economic performance, indirect economic impact and customer service. In 2017, the overall economic performance was recovered and improved over previous years. We are continuously strengthening our ability to provide full-service services to our customers. As the overall economic performance slowly picks up, our annual performance and service effectiveness have improved compared to previous years. In addition, for many overseas regions, we have strengthened the construction of transportation hub ports, which has a large indirect economic impact on the local areas. In this dimension, we described three materiality issues in the report: "Building a China Kazakhstan Two-way Convection Transport Channel between Asia and Europe", "Strengthening Dynamic Monitoring of Ships' Daily Activities" and "Providing High Quality and Efficient After-sale Service".

In the security dimension, it is mainly about customer health and safety. For shipping companies, it is to ensure the safety of

transportation services, including cargo security, ship safety and personnel safety. In this dimension, we elaborated on four materiality issues: "Implementing Strict Inspections on Safety Production", "Managing the transport of dangerous goods", "Measures Taken in Preventing and Responding to Typhoons" and "Preventing and responding to pirate attacks".

In the employee dimension, occupational health and safety, equality and diversification, and safeguarding human rights are major. The maritime industry is a risky job and it is very important for the protection of employees. In addition, issues such as equality and diversification of employment principles and safeguarding human rights are all concerns of employees. In this dimension, we have elaborated on four materiality issues: "Ensuring Employees' Safety and Training", "Protect the Legal Rights of Our Employees", "Maintaining Equality and Diversity" and "Creating a Warm Working Environment".

In the social dimension, it is mainly anti-corruption and community participation. Anti-corruption is currently the most popular topic of state-owned enterprises. Every employee must abide by state laws and cannot become a corrupt locust. In addition, the community's participation in this issue is mainly related to how companies respond to society. In this regard, we have made many efforts in 2017 and we have achieved many results. In this dimension, we have elaborated on three materiality issues: "Carrying Out Anti-corruption Work and Implementing Anti-corruption", "Taking Targeted Measures In poverty Alleviation" and "Providing Employment Opportunities for Local Communities".

In the environmental dimension, it is mainly energy, biodiversity, and sewage and waste. The biggest cost of shipping companies

comes from energy consumption, and the biggest impact on the environment is from the pollutants generated by energy consumption, such as waste gas and oil wastewater, which are the most important environmental issues for shipping companies and stakeholders. In addition, the loading and unloading of ballast water during the shipping process is one of the main channels for the invasion of alien species, and the diversity of marine life will have an impact. Therefore, the management of ballast water handling is an important issue for shipping companies. In this dimension, we elaborated on four materiality issues: "Practicing Green Voyage of Shipping", "Managing Ballast System", "Disposing Vessels in a Green Way" and "Disposing Waste Oil in a Green Way".

2) Communications with Stakeholders

Trusts and supports from the stakeholders are fundamental to COSCO SHIPPING Lines' continuous development. We have established the various stakeholder channels to communicate with the 10 groups of stakeholders actively, including the government

agencies, suppliers, communities, business partners, trade unions, insurance and financial institutions, NGOs, shareholders, customers, and employees.

Classificati on of topics	Main topics	Stakeholders Engagement	Communication Channel	Responses	Corresponding topics of materiality issue
Environm ent Topic	Water Energy Biodiversity Emission Effluents and waste Product and service	Government Community Non-government organization Shareholders	Inspections by competent authorities; Special work reports; Public initiatives; Join associations and societies; Annual report; Shareholders' meeting	Implement energy conservation mechanism Strict management on emissions and sewage Standard management of ballast water Green ship recycling Establish oil residuals emergency plan Establish evaluation mechanism on environment and energy	"Practicing Green Voyage of Shipping"; "Managing Ballast System"; "Disposing Vessels in a Green Way"; "Disposing waste oil in a green way"
Economic Topics	Economic performance Indirect economic impact Customer satisfaction and complaints Customer privacy	Government Customers Partners Employees Shareholders Insurance financial institution	Special work reports; Daily business contact; Customer satisfaction survey; Customer complaints management; Industry meetings; Shareholder meeting; Annual report; Staff congress; Internal communication system	Implement leading cost management strategy Enhance capital management Realize synergy effect Build the whole supply chain Provide employment opportunities Implement customer satisfaction Establish customer privacy mechanism Improve customer complaint mechanism	"Building a China Kazakhstan Two-way Convection Transport Channel between Asia and Europe"; "Strengthening Dynamic Monitoring of Ships' Daily Activities"; "Providing High Quality and Efficient After-sale Service"
Safety Topics	Customer safety and health	Customer	Website booking and inquiry; Marketing meeting; Daily business contact; Staff congress; Daily work meeting	Strengthen dynamic monitoring of ships' daily activities and shipping schedule management Implement measures to prevent navigation risk	"Implementing Strict Inspections on Safety Production"; "Managing the transport of dangerous goods"; "Measures Taken in Preventing and Responding to Typhoons"; "Preventing and responding to pirate attacks"
Employee Topic	Non-discrimination Child labor Forced labor Training and education Industrial relationships Occupational Health and Safety Diversity and Equal Opportunity	Government Employees Labor union Community Non-government organization	Staff congress; General manager Mailbox; Various meetings; Internal communication system; Employee satisfaction survey; Collective negotiation	Hold Trades Union Congress Implement employee satisfaction survey Comply with national labor laws and regulations Enhance staff training Improve wage security mechanism Establish multilevel communication channels Enrich employees' life	"Ensuring Employees' Safety and Training"; "Protect the Legal Rights of Our Employees"; "Maintaining Equality and Diversity"; "Creating a Warm Working Environment"
Social Topics	Community involvement Anti-corruption Supplier evaluation	Government Employees Labor union Community Non-government organization Suppliers	Inspections by competent authorities; Special work reports; Public initiative; Community investment; Contract negotiation; Bid meeting	Implement of poverty alleviation Organize community welfare activities Strictly enforce audit system Implement and handle reporting complains Establish equal procurement mechanism Expand opportunities for cooperation Implement strict assessment and audit on suppliers Enhance local procurement	"Carrying Out Anti-corruption Work and Implementing Anti-corruption"; "Taking Targeted Measures In poverty Alleviation"; "Providing Employment Opportunities for Local Communities"



## Strengthening the Ability to Transport in the Whole Course

On May 14, 2017, the "Belt and Road Initiative" International Cooperation Summit was held in Beijing. The Summit brought together leaders from more than 30 countries and leading officials of the United Nations, the World Bank and the International Monetary Fund. During the forum, the President Xi Jinping of PRC delivered the speech regarding "Jointly Promoting the Construction of 'Belt and Road'". President Xi emphasized: "2017 is the fourth year of the 'Belt and Road' practice. Smooth roads creates prosperity in all sectors. The purpose and significance of the 'Belt and Road' is to benefit the development of countries along it, and the prerequisite for development is the smooth flow of production factors."

As the world's fourth largest container fleet and the largest container terminal operator, we play an important role in the promotion of the "Belt and Road". By 2017, our land trains have covered many important nodes of the Silk Road Economic Belt, and our 116 routes have passed through the 21st Century Maritime Silk Road, with a capacity of 1 million TEU, accounting for 58.6% of the total capacity.

The "Belt and Road" route in Europe mainly consists of the northern and southern routes. The northern route uses the Eurasian continental bridge as the main route, starting from the inland provinces of China and traveling westward through land transport, via Xinjiang, Central Asia and Russia to Europe. The southern route begins from the southern coastal cities of China, and reaches the Greek Port of Piraeus in the Mediterranean Sea. On the important nodes of the "Belt and Road", we have made full efforts to build the China-Kazakhstan cross-border transport project with the Horgos-East Gate Land Port as the international logistics center.

Our development lies on the quality of our service. We are keeping focus on "Clients are priority", and developed differentiation strategies to provide high quality service throughout the whole shipping process. In order to achieve this goal, we continually enhance the dynamic monitoring of shipping activity to make sure the goods can be delivered on time. We also invited clients to join the experience plan which help us understand their thinking. Complaints from customers will be dealt with promptly. In 2017, our averaged on-time rate is 70.70%, ranked in the top 3. In the meanwhile, our global customer satisfaction index is 87.94 and we dealt with 4 complaints. The settlement rate is 100.00%.

In the following three chapters, you will be told about our efforts and achievements in the China-Kazakhstan cross-border transport project, the dynamic monitoring of shipping activity, schedule tracking and providing quality and efficient customer service.





# Building a China Kazakhstan Two-way Convection Transport Channel between Asia and Europe.

The Horgos-East Gate Land Port is located in the Horgos-East Gate Special Economic Zone in Kazakhstan, and it is an important logistics transit point. This port is only 15 kilometers away from the Horgos Border in Xinjiang Province of China, 5 days drive from Lianyungang rail transport, and 9 to 10 days drive from European rail transport. The port mainly runs block container trains' international transit business, logistics, multimodal transport, warehouse services and other businesses.

The Horgos-East Gate Land Port Project is the first cooperation project between China and Kazakhstan in building the "Belt and Road Initiative", and it also perfectly aligns with Kazakhstan's new economic policy of "Bright Path". On the one hand, the development of Silk Road Economic Belt provides funds, talents, and technical support to the "Bright Path" to a great extent. On the other hand, the Silk Road Economic Belt will assist in strengthening cooperation between China and Kazakhstan and other countries along the Silk Road, and promoting the process of regional economic integration. In June 2017, Chinese President Xi Jinping took a state visit to the Republic of Kazakhstan, and during this period, the leaders of China and Kazakhstan jointly promoted the start-up operation of the Dry Port project, which marked the formal formation of the pattern of China t Kazakhstan two-way convection transportation between Asia and Europe.

COSCO SHIPPING and Lianyungang Port Company have jointly promoted the rapid development of China-Kazakhstan cross-border transport channel with China-Europe block trains as carriers. As early as 2011, the China-Europe block trains started operation. Nowadays, the China-Europe block trains have accelerated reliance on guaranteed supplies brought by powerful route network of COSCO SHIPPING Lines and high-quality services provided by sea-rail transportation. Let's take the Lianyungang-Horgos line as an example. Two trains carrying forty to seventy 40-foot containers depart from Lianyungang to Horgos every week, and it only takes 7 days to travel the 4,200-kilometer journey to arrive at the destination. After that, the trains have a rail exchange at the Dry Port, and the cargos will be distributed to 34 cities in 12 European countries. It was hard to imagine such speed of transport and the coverage in the past.

The clients have tougher requirements on door-to-door transportation services under the fierce competition in global

shipping. Therefore we actively build the sea-rail combined transportation services, and we will step up our transport capabilities in the inland areas on the premise of maintaining our maritime advantages. The door-to-door transport services through sea-rail combined transportation coincides with one of COSCO SHIPPING Lines' core strategies: "to enhance the ability to provide the solutions of entire transportation for clients". For that reason, during the process of implementing the Land Port Project, we actively cooperate with Lianyungang Corporation, China Railway Corporation, and Kazakhstan National Railway Company to play the strengths on shipping network, port area, domestic railway capacity and the assembling and evacuating capability of the Trans-Caspian railway. We aim to provide our customers with a global supply chain integrated service by improving every aspect of our entire transportation journey. We are delivering goods ranging from previous IT accessories such as mobile phones and computers to clothing, automobiles, food, and so on. In May, 2017, we successfully delivered the wheat from Kazakhstan to Lianyungang through the Horgos-Lianyungang route and then to countries in Southeast Asia through sea route.

President Xi suggested in a video link activity that: "This new Asia-Europe land-sea combined channel, which is linked by Lianyungang-Horgos route, should be built to become a benchmark and a model project of the 'Belt and Road' Initiative." Therefore, we will support a perfect land-sea combined transportation system, hold the regional characteristics of the Land Port, utilize the strategic advantages from the partners, and make the Horgos-East Gate Land Port become a global logistics transit hub step by step. A journey of a thousand miles starts from the first step.



The leaders of China and Kazakhstan jointly promote the operation of the waterless port project.



Important node of Asia-Europe block trains, The Horgos-East Gate Land Port

## ◆ Opinion

"The two-way and cross-border transport between China and Kazakhstan has greatly improved the trade volume between China and Kazakhstan. In the past, Kazakhstan mostly traded within the CIS. Now, the sea-rail intermodal transportation built by us promotes the trade between the two countries to a great extent through the container transport and the Asia-Europe block trains. We hope to import more energy, grains, beef, mutton, and dairy products from Kazakhstan.

——Guoming Fan, a Chinese staff of COSCO SHIPPING Lines

"Think about the hardship we experienced ten years ago when we sent off a train of goods to Central Asia! There are not enough trains to carry the clients' cargo. When the cargo got finally loaded on the train, there might be a traffic jam at the Alataw Pass. Now we have trains every week, and even every day in some places. As a staff of the Xinjiang Company, I am very proud of it!"

——Yu Tianxin, Assistant Manager of the Operating Center, Qingdao Branch, Xinjiang Company

# Strengthening Dynamic Monitoring of Ships' Daily Activities

The dynamic monitoring of ships refers to the real-time monitoring of the location of the ships by technical means, so that we can gain real-time tracking of the ships' safety and shipping schedules. In particular, it is real-time monitoring of the ship's equipment, navigation path and status, as well as the management of files and databases. This will help our continuous improvement of the communication channel to make it more intelligent.

The dynamic monitoring of the ships is related to the safety of our shipping, the use of fuel and the punctuality of shipping; therefore, this is our work priority. In this regard, COSCO SHIPPING Lines have established the Marine Operating Center (MOC), which is responsible for the real-time management and monitoring of the operations, to ensure the efficiency, safety, punctuality and cost efficiency of service provided. At the same time, to promote the work of energy saving, emission reduction and environment protection. In 2017, the MOC has established an evaluation system for shipping schedule and fuel consumption, based on the monitoring of the schedule, voyage, speed, power and fuel consumption. In one year, we have completed the vertical monitoring of the ships' dynamic shipping activities, shipping progress (early-arrival, behind-schedule), working condition,

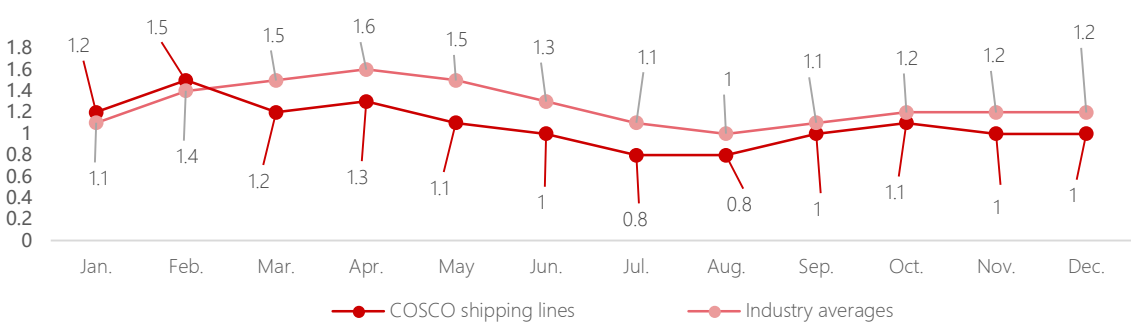
and have integrated elements such as equal-power navigation and trimming optimization with meteorological navigation and route optimization. In general, we have realized the real-time tracking of ship navigation and operations on the berth, thus achieved optimum balance between safety and fuel-efficient and also ensured the service quality.

In the daily operation monitoring work, we hold the belief of refinement, standardization and cost priority to strengthen the ability of dynamic monitoring and navigation tracking. To this end, we make use of technical means such as, *Ocean Shipping*

*Global Dynamic Master Control System, Energy Efficiency Management System, and externally procured GVVMC (Global Vessel Voyage Monitoring Center) System, the website of shipping information (www.shipxy.com), meteorological navigation service providers, and trimming optimization monitoring system. In addition, we strengthen interaction between ports and vessels, and also promote the IOP (Improvement of Operating Productivity) project. We succeed in implementing the IOP project across 9 major regions of the Far East covering 11 ports and 19 wharves, so as to optimize the shift schedule, to improve the ship's direct calling rate, operation efficiency at the ports, and to reduce operation time at the port, and therefore to guarantee the smooth operation and ensure the timely delivery of customers' cargo.*

In 2017, our ships' on-time rate was the best in the industry in our efforts. According to the statistical report of the global leading container shipping companies on-time rate released by CargoSmart (a global shipping and logistics solution provider), we learned that: First, COSCO SHIPPING Lines' on-time rate was generally higher than the average rate of the industry, and maintained top three in the industry among most of the months. The averaged on-time rate is 70.70% for the year of 2017. In 2017, with the strategic change of the marine shipping layout, the Ocean Alliance's has higher on-time rate compared to the alliance of 2M and THE, and our company's performance was the best in the ocean alliance. Second, regarding the Estimated Time of Arrival (ETA) deviation, our deviation days are lower than the average level of the industry, which means that we have effective control over the deviation of transport time during shipping. Maritime shipping have to face continuous climate changes, hence a good control over the deviation time determines whether it is an outstanding company or not.

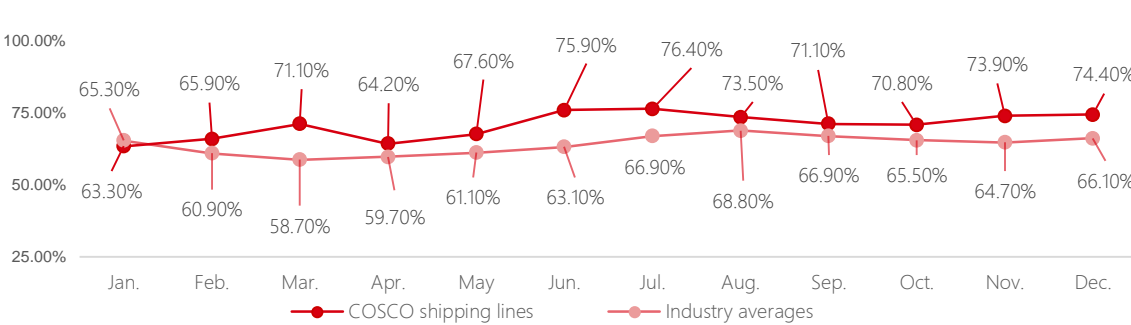
ETA Deviation for COSCO SHIPPING Lines and The Industry (by day)



\*Data Source: Carrier Performance Measurement from CargoSmart 2017

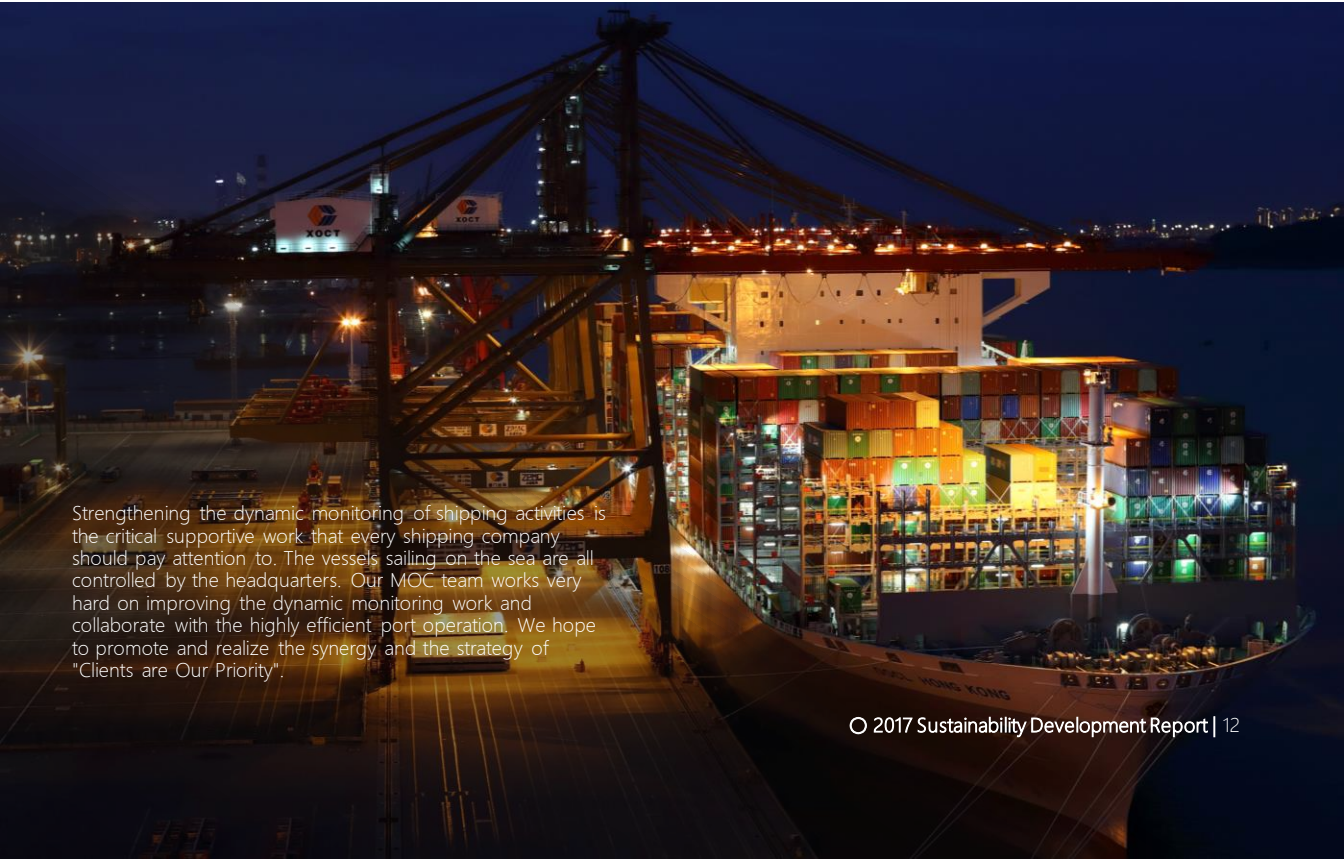
We can see from the graph above that, COSCO SHIPPING Lines' delivery deviation days were lower than the average level of the industry except for January and February.

On-time Rate for COSCO SHIPPING Lines and The Industry



\*Data Source: Carrier Performance Measurement from CargoSmart 2017

We can see from the graph that COSCO SHIPPING Lines' monthly on-time rates were higher than the average level of the industry except for January 2017. The 75.90% in June was 12.80% higher than the industry level.



Strengthening the dynamic monitoring of shipping activities is the critical supportive work that every shipping company should pay attention to. The vessels sailing on the sea are all controlled by the headquarters. Our MOC team works very hard on improving the dynamic monitoring work and collaborate with the highly efficient port operation. We hope to promote and realize the synergy and the strategy of "Clients are Our Priority".



# Providing High Quality and Efficient After-sale Service

Our clients are everywhere across different industries. We devoted to providing the best shipping solution guided by the principle of "Clients are Our Priority". In order to enhance the communication with our clients, we established the customer service department to improve the quality of our services in a targeted way after understanding our clients' needs.

As a company specializing in maritime container transportation, our business spreads all over the world. At home, we have nearly 300 shipping companies, and we have outlets outside Europe, the United States, Asia, Africa, and Australia. We have established a customer service department and always adhere to the "customer-centric" principle to maintain communication with customers, understand customer needs and feelings, and constantly optimize our services.

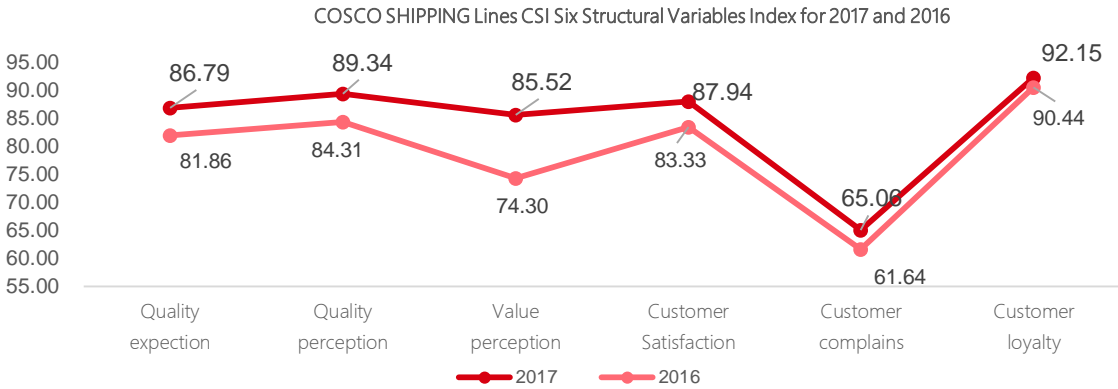
Each year, we commission a third party to conduct a customer satisfaction survey. In 2017, 2,511 questionnaires were sent out and a total of 1,796 questionnaires were recovered. The global customer satisfaction index (CSI) was 87.94, compared to 83.33 last year. As a result of the increase, the survey content includes six chapters from ACSI: customer expectations, quality perception, value perception, customer satisfaction, customer complaints, and customer loyalty. In 2017, the COSCO SHIPPING Lines' shipping index in each sector increased over the previous year.

We are keeping focus on expanding channels for customers to file complaints. Call center and public mailbox were built in 2016 after the integration of resources. Once the call is received, it will be distributed to headquarters and relevant ports. The problems

proposed by the customers will be managed in a more precise way. In 2017, the open of WeChat online customer services enabled us to be reached at any time during working hours, so we can convey timely feedback to our customers.

We investigate the complaints at first and assign them to relevant departments for handling. We pay return visits to check whether the complaints are handled in an effective and timely manner. Our customer service department summarizes complaints and identify the common problems and obstacles in the operating process and will share the recommendation for improvement throughout the whole company. This is to enhance our sense of services and responsibility for continuous improvement. No complaint was received in 2017 for COSCO Shipping Ports, while 4 complaints were received and addressed successfully and promptly for COSCO SHIPPING Lines.

The protection of customer privacy is an essential step in customer service and also plays an important role in the management of customer relationship. Our global sales department is responsible for the establishment, inspection and improvement of the protection system and also to protect customer information from missing or being used illegally. We sign the confidentially agreement with our clients and promise not to share, disclose or sell their information to other parties exclusive of our employees, authorized agents, partners or subsidiaries. In 2017, there were no complaints of violation of customer's privacy.



## ◆ Case: Experience Officer Plan

In order to discover and analyze problems existing in customer service, we invited 62 representatives among our Chinese clients as the experience officers in 2017. The representatives were made up of direct customers and agencies, long-term customers and new customers. Since the issue of the plan, we made two phone calls and one online survey for each customer. During the investigation process, we asked for suggestion for improvement on our service and try to find out undiscovered aspects that were important to clients and would visit our clients if proposed questions were complex. The plan helps us to continuously improve our service and customer experience.

## ◆ Case: In cooperation with the world's leading furniture retailer

We are a global shipping company with solid foundation so we are able to meet the demands of customers and keeping improving the quality of our service. There is a world's leading furniture retailer working with us for 12 years and have developed its contracted capsize haul from thousand tons to million tons. Now we are one of their first tier suppliers.

Our client conducts annual audit work on its suppliers and we rank in the top among all audited ones. The applied auditing standards are from 14 dimensions involving environmental and social aspects. Our CSCL Atlantic Ocean vessels gained very high score in the audit work of 2017. The timely and flexible coordination between the headquarters and the ports and the speed of solving problems help to ensure the quality and efficiency of our services. That is the reason why we enjoy a long-term and stable relationship with our client even when the shipping market is competitive.



"CSCL Atlantic Ocean which was 399.67 in length, 59.60 in width, capacity of 18,982 TEU, was built in 2015." In the audit work of 2017, our client was very satisfied with us among all its suppliers.

## ◆ Opinions

"Since 2016, they provide more comprehensive services. It has been many years since we worked together and I have confidence in our future cooperation. I hope that they will be stronger and able to compete with those top shipping companies from America and Europe and be the industry leader in the future."

——Leader of purchasing business from the leading furniture retailer

"I hope COSCO SHIPPING Lines, as our first tier supplier, could do better in the area of carbon emission reduction, because 40.00% of our carbon emission is from the shipping process. If they can create more green ships, I am sure there will be some breakthrough in our cooperation."

——Leader of sustainable business from the leading furniture retailer

We think in our customers' perspective, so we adhere to the "Clients are Our Priority" development strategy. We try to grasp the real needs of our customers before expanding further. To this end, we continue to optimize our communication channels

and try to understand their opinions and suggestions through proactive communication, and handle customer complaints in a timely manner. Customer satisfaction helps us to find the best way to achieve the true value.



## Ensuring Safety of Navigation

The shipping industry is a heavy input, high-risk, capital-intensive and highly specialized service industry. Apart from the common risks that ordinary enterprises may face, the shipping industry also has to face risks that are unique to this industry. Security is one of the most important issues that shipping companies have to face. It is also the most important issue concerned by all sectors of society. We adhere to the principle of "Putting Prevention as Priority while Combining with Resistance" to implement the safety production. We ensure the safety of shipping by strictly following the regulations on safety production and preventive measures that we created.

We conducted ship safety inspections and drills. In 2017, we conducted 1179 safety inspections to track owned vessels 832 times with navigational risks and remediated the identified problems and risks immediately.

We set stringent standards for the inspection and transportation of dangerous goods. In 2017, we carried 136,739 TEU dangerous goods with 18 incidents happened, all of which were promptly and effectively addressed and no casualties happened.

For anti-piracy and prevention of typhoon, we conducted specific drills to control the risks, and exercise contingency plans if there is an emergency. In 2017, we tracked and guided ship 149 times without any property damage or personal injury. We tracked 220 times with respect to ships sailing in waters with risks and employed armed guards 74 times. No loss was occurred due to pirate attacks.

In the following four Chapters, you will be told what have done in safety inspections, management of dangerous goods, prevention of typhoon and anti-piracy areas.



# Implementing Strict Inspections on Safety Production

We attach great importance on safety navigation and safety operation at the ports. In order to ensure that and to maintain a safe working environment for our employees, we strictly follow the rules in the *Production Safety Law of the People's Republic of China* during our production process and formulated various regulations for safety production such as *Measures for the Administration of Safe Production, Safety Management Responsibility Provisions and Emergency Plan for Safety Production* and so on. In 2017, there was no serious safety accidents happened in our container shipping business and safety production basically remains stable in the process of operating our own ships.

We work hard to create a security team. At present, our team members are all over the world. In order to improve safety management level and ensure a comprehensive and balancing development of safety management, we focus on improving the quality of our team. In 2017, we organized 23 managers and 29 staffs to conduct various specialized trainings and helped 200 safety personnel to obtain safety management qualification. These special training on safety management would help our safety managers both in theoretical and practical areas. In the meantime, our Company will gradually eliminate geographical differences in safety management and build more coordinated team.

We strive to strengthen the safety management of the ship. Navigational safety is our focal point. To this end, we constantly improve the work of our crews and staff on the shore, take advantages of big data, network-based environment and professional teams and try our best effort to ensure the safety of navigation. In 2017, we tracked 832 times with respect to

vessels with navigation risks, the tracked vessels were based on owned ones, and the details are as follows:	
Risky Events	Total
Track and guide vessels facing heavy wind	93 times
Track vessels in ice zone	1 time
Track vessels in the mist	202 times
Guide the prevention work in typhoon	14 times
Inspecting vessels	289 times
Track tropical storms over northwest Pacific Ocean	27 times
Track storm over other oceans	56 times

We carried out safety inspection and potential problems identification activities. We carry out this kind of work every year in the corporation, pay close attention to the implementation of various measures, summarize all problems identified during the process, analyze and rectify them in a timely manner.

In 2017, we conducted 1,179 safety inspections, identified and rectified 3,672 defects:

Safety Inspections Implemented	Found and Rectified Defects
Implement vessels inspections 272 times	1,213
Implement inspections on land 901 times	3,361
Implement inspections at the ports 6 times	98

## ◆ Case: Safety inspection of "SONGYUN HE" vessel

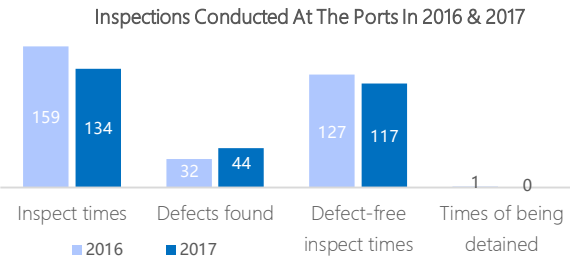
In January, 2017, we implemented inspection on "SONGYUN HE" vessel and made assessment on its safety, ability of handling emergencies, key equipment and rescuing. We discovered 8 defects and asked the responsible personnel to solve them in a given period of time.



Outside the enterprise, we would continue the supervision work called "Port State Control" in 2017, to increase the passing rate for obtaining the "non-approval required" status. In 2017, a total of 134 PSCs were implemented, 117 of that passed with no defects found, which accounts for 87.30% of the total number of inspections. The passing rate increased by 7.50% as compared to the same period of last year. The rate of defect-free pass rate has increased from 2016 while with no ships being detained.

In the view of regional distribution of PSC inspection incurred, the key areas are China, Indonesia and the United States. Common defects are mainly focus on ship firefighting equipment and its certificates and documents. We strengthened the process of tracking and analysis of defects, and formulating rectification measures. The problems found in the PSC inspection were emphasized during the crew training and inspection process. Then their ability of managing safety inspections would be improved and the objectives and requirements of maintenance and routine management of the ship can be implemented so as to improve defect-free pass rate and prevent the ship from being detained.

We carry out special safety activities focusing on building an intrinsically safe management system after organizing special rectification activities, strengthening prevention and control processes and improving shortcomings. In 2017, we conducted a total of 4,599 visits with 25,000 participants. For example, we have carried out activities such as safety production month campaign, the special safety management of the driver's team and the field work team, and safety drills.



## ◆ Case: Exercise of dealing with dangerous goods leakage on "TIANYUN HE"

The background of the drill conducted in June 2017 was about leakage of "isoprene" happened due to malfunction which caused a fire and slight poisoning and injury to the crews, thereby endangering safety of the ship and the crews. In this drill, MOC guided crew members to carry out emergency rescue of injured personnel. After the drill, the team summarized and evaluated their performance. Through this exercise, the feasibility and effectiveness of the Company's Emergency Response Plan and Special Emergency Plan for Carriage of Dangerous Goods by Ships were tested. The emergency rescue team acted swiftly and with clear responsibilities and objectives in mind.



We conduct safety inspection with all of our endeavor which is essential to the shipping industry. We have built stable safety management system in enhancing the management and implementation of safety shipping and also in organizing training on safety inspection. We will continue doing that in the future and be the safeguards of our people, our vessels and our cargos.



# Managing the transport of dangerous goods

According to the International Convention for the Safety of Life at Sea and FINAL ACT OF THE INTERNATIONAL CONFERENCE ON MARINE POLLUTION, 1973 1978 Revised, constrained by Basel Conventions and meeting the requirements from IMDG CODE, dangerous goods refer to goods with explosive, flammable, poisonous, corrosive, radioactive and other dangerous characteristics, which could easily cause personal, property and environmental damage during the transportation, handling and storage. Dangerous goods must be packaged with special materials or in solid bulk.

We establish several regulations and rules, such as Dangerous Goods Transportation Management Regulations, Dangerous Goods Transportation Operation Notice, Shipping Dangerous Goods Accidents Special Emergency Plan, Shipping Dangerous Goods Reveal Emergency Notice, COSCO SHIPPING Lines Co., Ltd. Dangerous Goods False and Hide Clients Blacklist Regulation and COSCO SHIPPING Lines Co., Ltd. Dangerous Goods Methods of Prevention and Disposal of False and Hide. These regulations and rules help us achieve standardized and institutionalized management for dangerous goods' operation procedures, transportation mode, checking and recording, staff protection, emergency plan and concealed blacklist. In 2017, the dangerous goods handled by our container service and port service were 136,739 TEU. All of 18 accidents happened related to good transportation and damages have been dealt with promptly and effectively. There was no casualty.

When emergency, such as fire, explosion, casualties and poisoning, occurs involving dangerous goods, we require field staffs to implement the requirements from IMDG CODE strictly. For instance, if the leakage of dangerous goods occurred during the shipping transportation, sailors must execute the instructions in the emergency manual, and the Captain should inform the headquarters immediately. Then according to the headquarters' instruction, the Captain along with the first mate commands in the leakage accident on field, estimates the type and quantity of leakage goods, commands sailors to perform recuse wearing full sets of protecting suits. If necessary, the

Captain could evacuate the sailors to ensure their safety. After the accident, we will set up a special accident investigation team to study and summarize experience to ensure no more similar accident will happen again in the future.

False and concealed dangerous goods is another significant risk for shipping enterprises. These behaviors will cause serious loss of life and properties, so we must handle with these situations seriously. Therefore, we create a blacklist of clients with bad track records and build a three steps management processes including prevention monitoring, dangerous goods emergency disposal and accountability for the punishment. We will check and control suspicious activities strictly during the processes of goods' collection, booking, handling and transportations. For instance, when checking the conditions of goods, all chemicals must provide MSDS, the product safety technical specification. When checking the shipping lists, document operators must check whether dangerous goods are included in the containers during lists making process. Once false and concealed dangerous goods are discovered, the internal or external branches, agencies or ship will take actions immediately and inform the headquarters. Then the headquarters will formulate emergency plan based on the particular situation. In addition, we require all port companies to maintain the communication with clients and to report these false and concealed clients to the headquarters immediately. The headquarters will add the clients' bad records into the blacklist. Those blacklisted clients are strictly prohibited to order our containers in the future.

Dangerous goods operation and transportation is one of the most dangerous services for shipping enterprises. Each responsible employee much execute relevant operation rules strictly without any defect. We will work in standardizing and institutionalized operations at the port and on the ships. We will estimate and formulate emergency plan, provide daily employees security training and punish false and concealed behaviors. We need to ensure that we can control every detail in shipping. It is not only for the security of goods, but most importantly, it is protection for our employees' personal security.



## ◆ Case: Dealing with dangerous goods leakage accident on "COSCO PACIFIC"

On July 20, 2017, we received feedback from Captain COSCO PACIFIC. At 4:45 pm, during the voyage from Shekou to Malaysia, we discovered the leakage of the product box. There were three types of flammable liquids in the box, which were dangerous goods. Workers immediately wore gas masks and rubber gloves as required to remove leaks from the lashing bridges and lids. At 9:40 pm on the same day, they cleared the leaks, controlled the leakage rate within an acceptable range, and used containers. Collect leaks and conduct real-time monitoring. On July 21, the container was unloaded after berthing. It was arranged for a third-party inspection, promptly changed the container, and returned the leaked container to the port of shipment.

## ◆ Case: Qingdao Branch and Local Customs Administration jointly handle calcium hypochlorite reporting events

In order to further strengthen the safe transportation of dangerous goods, we actively explored and introduced social management resources. In 2017, our Qingdao branch cooperated with the Risk Control Center of Local Customs (Qingdao) to jointly combat false reports of dangerous goods. On July 17, 2017, with the assistance of Huangdao Customs, it successfully seized a "calcium hypochlorite" cargo declaration. The name of the cargo was "water treatment agent" at the time of booking and declaration, but the customs declaration the product name was "calcium hypochlorite." After receiving the feedback from Huangdao Customs, the Qingdao branch immediately asked the division to carry out investigations. After being sampled and certified by the customs authorities, it was basically determined that the customer actually shipped the 5.1-category cargo "calcium hypochlorite".



# Measures Taken in Preventing and Responding to Typhoons

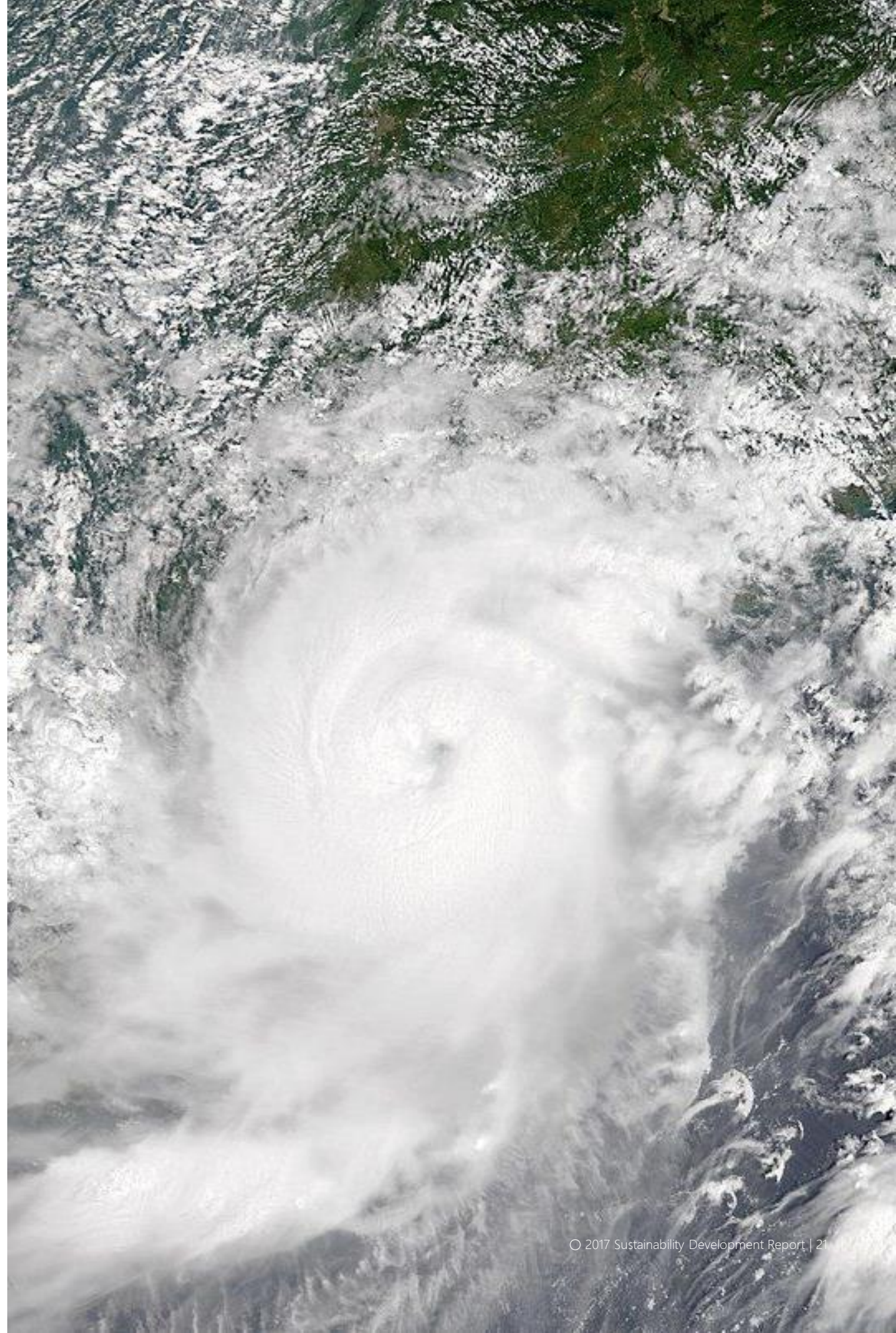
Typhoon has brought great risks and challenges to the shipping activity. Therefore, it is very common for Chinese coastal areas to be hit by typhoons every year, especially in south-eastern coastal area.

The impact of Typhoon is on a large-scale and may last long (generally May to October) and poses serious threat to the safety of crews and properties. We have formulated Regulation on the Prevention of Flood for Ports and Prevention of Typhoon Instructions to establish mechanism for preventing and handling emergencies. Our crews should collect precise typhoon information by making use of advanced technology such as meteorological information network. In addition, we summarize our work and improve the existing problems and to safeguard our personal and property safety every year.

For the precautions against typhoon approaching, we introduced the Precautions Against of Typhoon Instructions, which clarifies the regulations that crew members should follow and emphasizes that "Preparation is priority, escape when timing is right and allowance for unforeseen circumstances". The Captain is responsible for ship safety in the first place and can make decisions and commands during the process. The Captain organizes all crews to learn the knowledge of precautions against typhoons according to the different seasons and navigation areas. Crew members conduct self-examinations every year according to the contents of self-checklist of facilities, record results and report to command center immediately. Weather information is collected and used to track the movement and location of typhoon no matter we are sailing or

not. Within 48 hours before typhoon approached, we have addressed four response levels. In order to respond in each level, we need to complete the form of the movement and location of typhoon at the specified time and submit it to the Command Center. The principle is "scientific analysis, comprehensive assessment, correct decision-making and reasonable resistance", which guided us to reduce fuel loss and to arrive on time.

In 2017, we tracked a total of 27 typhoons and made detailed records of each typhoon's formation points and landing locations. Throughout the year, 154 vessels affected by typhoon were tracked, and the total time for anti-platform duty was as high as 372 hours. We strictly followed the principle of "Preparation is priority, escape when timing is right and allowance for unforeseen circumstances" to implement anti-countermeasure measures. The number of vessels affected by typhoons below the grade is 75, and the number of vessels affected by grades 8 to 10 is 5. No ships affected by typhoons 11 or above are affected. We achieved a complete victory in this year's anti-counterfeiting work. No property loss and casualties occurred. Meanwhile, we summarized the important lessons learned in the aspects of mechanism construction, emergency drills and implementation of preventing flood. Although we still have a long way to go, we are devoted to the continuous improvement of work strategies, are prepared to deal with disastrous weather emergencies.





# Preventing and responding to pirate attacks

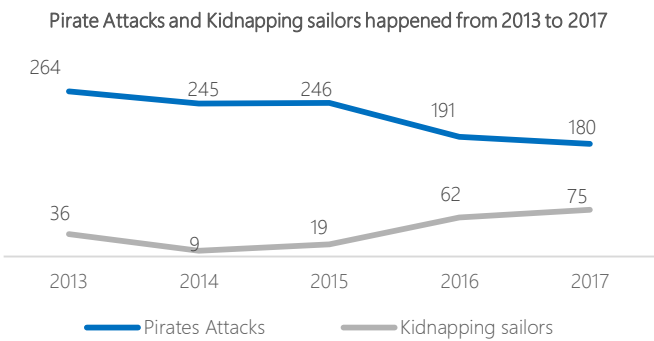
According to statistics released by the International Maritime Bureau (IMB) on piracy incidents worldwide in 2017, the pirate attacks were declining year by year. In 2017, 180 piracy incidents happened worldwide, decreased by 6.00% compared to 191 incidents in 2016. On the other hand, the number of crews kidnapped by pirates around the world has increased by 21.00% to 75 incidents in 2017. Three points can be summarized from the analysis. Firstly, the number of piracy incidents was gradually decreasing, but their attack efficiency was increasing. Secondly, pirates had shifted their focus from robbing goods to kidnapped crew members and ask for ransom. Thirdly, the global situation of anti-piracy was not optimistic.

As one of the largest shipping companies in the world, we are under great pressure in anti-piracy. As you can see from chart above, the pirate attacks in 2017 mainly happened in Indonesia, Southeast Asia, Arden Gulf and the Gulf of Guinea, where many of our routes were covered. In order to prevent pirate attacks and protect the safety of crew members and goods, we have formulated the Notice of Anti-Piracy and established Ship Management Center and Security Departments to supervise, inspect, warn and instruct the crews in their daily anti-piracy work, and provided training on a regular basis.

In order to ensure navigation safety, we have formulated measures against pirate attacks and always adhered to the principle of "Put Prevention First, Always Be Prepared, and Respond Promptly". First of all, we paid special attention to accident-prone areas including Southeast Asia, South Asia, East Africa and West Africa. We tried to get far away from the pirate areas when designing the routes. For example, pirate attacks in

the South China Sea happened less frequency than that in the Sulu Islands because the ship can sail to the west of Kalimantan to avoid attacks happened in the Sulu islands. Moreover, during the voyage, the crews received the sailing notices promptly after they were issued by the anti-piracy center. Before entering into the areas where pirates are active, the captain would ask the crews to get prepared and stay alert and establish the ship's anti-piracy alarm signals and contact information. At the same time, all channels were closed except leaving a passage outside the living area. All warehouses would be locked and anchor is fastened. While sailing into in pirate-infested areas, all on-duty officers became vigilant and pay close attention to the nearby sea area and monitored the passing ships. Patrol officers focused on their work and make sure all communication equipment is working properly so that they can connect with the control room when attacks happened. When the ship was harassed by pirates, the crew would report orally to the headquarters right away according to the "Ship Security Plan", and the headquarters made judgements on whether to attack or to defend according to the circumstances.

In our daily work, we invite experts to work together on the prevention of piracy. In October 2017, we held a seminar on anti-piracy and a seminar on anti-piracy in West Africa in Shanghai. China Maritime Search Center, China Ship-owners Association, China Navigation Association, and other five Chinese and foreign maritime security and consulting companies. During the meeting, we summarized the anti-piracy work in 2017 and invited experts to analyze the current situation of piracy and put forward countermeasures.



When sailing in the sea, we attach great importance to the safety of crew members and goods. At present, the piracy attacks on ships have been greatly reduced due to the actions of the IMO and other countries. However, the anti-piracy situation remained grim and we attached great importance to the prevention of piracy. The important thing is how to prevent piracy and respond to the

incidents. In 2017, we tracked 220 vessels operating in high-risk waters and employed 74 armed guards as escorts. With our efforts, there was no loss brought by pirate attacks. We hope to keep up and continue protecting our vessels from being attacked.

## Opinion

"Piracy attacks and robberies in Asia increased by 19.00% in 2017. Potential criminal gangs may take actions at any time as oil price rebounds. And the coastal countries and shipping industry still need to be vigilant and enhance the ability to respond to piracy attacks and armed robbery before things get worse."

——Kuroki, the Executive Director of the Information Centre of the Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia





## Ensuring the Legal Rights of Our Employees

Nowadays, safeguarding human rights is a basic moral principle for international society. Human rights performance is concerned by many stakeholders including government, non-governmental organizations, trade unions and employees.

In order to safeguard the human rights of our employees, we have formulated a labor system that covers non-discrimination, child labor prohibition and prevention of forced labor, providing equal employment opportunities for both male and female employees, and creating a diversified work environment for them to be treated equally.

We value the employee's health and safety and capability enhancement. In 2017, we organized several safety education trainings and organized management personnel on the ports to participate in the training course on dangerous goods transportation. We also conducted training programs such as the "Elite Program" and staff exchange programs to enhance employees' safety awareness and management skills.

We strive to create a warm working environment and enrich staff's life. In 2017, we conducted activities such as "Happy Health Day" and held a talent show with the theme of "Remembering 2016 and Looking Forward to 2017" to let our employees to show their style and talent.

In the following four chapters, you will read about what we have done in ensuring occupational safety and training, safeguarding human rights, creating an equal and diversified employment environment, building staff capacity and creating a warm working environment.



# Ensuring Employees' Safety and Training

We always consider employees' occupational health and safety as the priority in production management. In order to provide assurance of good health and safety to our employees, we regularly provide employees with protection products that comply with the state regulations; special protection for employees exposed to special occasions or catering services for that are exposed to toxic and hazardous substances; and provide health examinations for female employees and employees over 40 years old. In summer and winter, we take the appropriate protection measures to ensure that our people are in good conditions, for example we will delivery cool drinks in summer and provide heating machines in winter. These daily management measures guarantee employees a safe, comfortable and healthy working environment.

In order to enhance staff awareness of safety and occupational health, we organize various safety education and training activities. For example, in 2017, the Commission on Safety Production organized several special training programs called "Production Safety Law" and "Labor Safety". For the transport safety of dangerous chemicals, we organized 96 professional managers from ports to attend training. We hope that these safety education and training activities could help reduce the number of employees injured at work. When an employee is involved in a safety accident, we will take immediate measures to reduce the level of injury, analyze and summarize causes of the accident promptly so as to avoid any recurrence.

In 2017, there were 2 workers who got occupational injury, which decreased 300.00% compared to 2016. The injury rate in 2017 was 0.08%. The total number of loss of working time was 90 days and there was no work-related death.

In order to enhance our employees' professional qualities, we have conducted many training activities for different levels of staff. We have added new training content based on documents such as the Administrative Measures on Training and Education and the Administrative Measures on Internal Trainers.

We pay attention to the cultivation of our employees, therefore we provide training sessions. In 2017, the total training hours

were 375,334 hours and the number of trained regular employees was 18,018. The training rate was 100.00%. Among them, there were 11,523 male trained employees, 6,495 female trained employees, 12 trained staff, and 18,006 other employees.

In 2017, our training aims to promote the improvement of employees' capabilities and performance. To this ends, we develop the curriculum system, innovate the training mode, further improve the training system and enhance the training management effectiveness. We have organized various training programs to continuously improve our staff capabilities.

Employees are the primary resources of the enterprise. Ensuring their occupational safety and enhancing the professionalism is an important way to maintain a sustainable operation of an enterprise. We value every employee's safety and provide them with occupational safety training and also protection measures. In addition, we devoted effort to cultivate our talents by providing targeted training to employees at different positions so that they can do better in their positions and develop their own sense of ownership through the study of occupational and management skills.



## ◆ Case: Implementing *Customer Service Competency Enhancement Training Program*

In our container shipping business, we have carried out service manual discussion for domestic customers at the ports and launched the "Improving Customer Service" training courses. In June 2017, Customer Service Department collected the problems frequently encountered in each port through mail and distribute them to customer service department personnel for discussion and analysis. In addition, we have also developed a rotation training plan for customer service department to receive professional customer service training.



## ◆ Case: Implementing "Elite Program"

In order to train a group of young talents with innovative spirit and also familiar with the overall businesses, we implemented and promoted the "Elite Program" in our container shipping business. At the beginning, a total of 649 young employees were enrolled. After taking the IQ test, foreign language assessment and performance appraisal, a total of 69 employees were selected as members of "Elite Program". From March to September 2017, we organized these 69 trainees to exchange information on relevant positions. Each trainee is guided by mentor who helps them him/her to set specific performance goals so that he/she can take on the job independently. Through job exchanges, research on various topics, business training and other means to further enhance the trainee's business ability and quality. After the training, we selected 50 outstanding trainees based on their performances and the quality of their research during the exchange.

Based on the characteristics and circumstances of the 50 trainees, we arranged further exchanges opportunities for them at their home town and abroad. 30 of them were arranged to work at the headquarters, Shanghai, Ningbo and other divisions. We focused on comprehensive training so we were arranged to work in different business positions, and had the opportunities to manage teams and projects. Another 20 students travelled to South Asia, West Asia, Latin America, Africa and other regions for a period of six months mainly focused on the market development, sales, extension of services and local agency supervision work. Human resources department and other related departments would give orientations in advance so that they can understand social, cultural environment and overseas work discipline and get adapt to the new environment as soon as possible.





# Protect the Legal Rights of Our Employees

We have established a sound system of labor and employment according to the provisions of the Labor Law. We have fully implemented the Global Compact and corporate social responsibility through the system of Employee Management Procedures and Procedures for the Recruitment of Government Personnel. We resolutely support the Universal Declaration of Human Rights and strictly comply with international conventions and rights with respect to human rights and prohibition on child labor, discrimination and forced labor.

## •Non-discrimination

We insist on equal treatment of employees of different nationalities, races, genders, religious beliefs and cultural backgrounds with respect to issues of employment, wages, promotion, dismissal and retirement. We strictly implement the national policy on ethnic minorities, carry out the freedom of religious belief and respect the habits of ethnic minority employees. In 2017, we had a total of 467 ethnic minorities. There were no discriminatory acts in our companies and no incidents or complaints of violations of the rights of ethnic minorities or freedom of religious belief occurred.

## •Prevent Child labor

We strictly abide by national laws and regulations in labor and employment and strictly prohibit the employment of child labor. The Human Resources Department has set up detailed hiring rules and review procedures to avoid hiring child laborers under the age of 16 by mistake. At the same time, we also set up the "Procedures for Saving Child Labor" as required by the SA8000, a social accountability standard, as a remedy for hiring child labor due to mistakes. In 2017, no child labor was found in our operation sites.

## •Prevent Forced labor

We strictly abide by the provisions of the Labor Law and fully respect employees' choices. We will put an end to mandatory labor for any reason, nor will we restrict our personal liberty. We will arrange orientation for every employee, give introductions of labor rules and regulations so that employees fully understand their work rights and business. In 2017, there was no forced labor reported at our locations.



Employees are the core of every enterprise. Respecting the human rights of employees is one of the prerequisites for the healthy development of an enterprise. As a large state-owned enterprise, we strictly abide by international conventions and recruitment systems, uphold the principle of non-discrimination, respect every employee, strongly prohibit the use of child labor and forced labor, and strive to safeguard and guarantee the human rights of our employees.



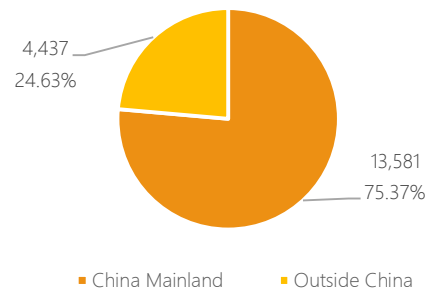


# Maintaining Equality and Diversity

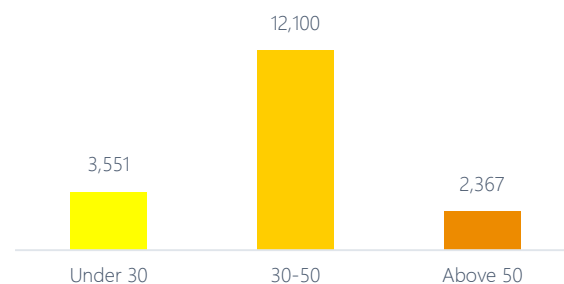
We strive to maintain equal and diversified employment opportunities, attract, unite, motivate and hire international talents and actively promote global operations and development. We strictly abide by the *Staff Management Procedures* and *Organization Officials Recruitment Procedures* and other systems to ensure that recruitment is done following the "merit-based enrollment" principle. By the end of 2017, the total number of employees in service was 24,190. Among them, the number of regular employees was 18,018, while the number of informal employees (labor services engaged from third-party companies) was 6,172. Among regular employees, there were 13,581 employees in the Mainland and 4,437 in overseas countries. According to positions, there were 12 management staff and 18,006 other employees. According to gender, there were 11,523 male employees and 6,495 female employees. According to the age range, the number of the employees under 30 was 3,551 people; aged 30 to 50 was 12,100, and there were 2,367 employees aged above 50. About 70% of the company's labor employees are labor crews, and about 30% of the employees work in various units on land. In order to strengthen the contingent construction of labor staff and improve the overall quality, the company conscientiously carried out safety management work, signed labor contracts in accordance with laws and regulations and market laws, improved the terms of the agreement, standardized occupational protection, ensured the healthy development of labor staff, and reflected corporate social responsibility.

In 2017, the number of employees resigned and the demission rate is 3.95% (Domestic data only). We respect our employees'

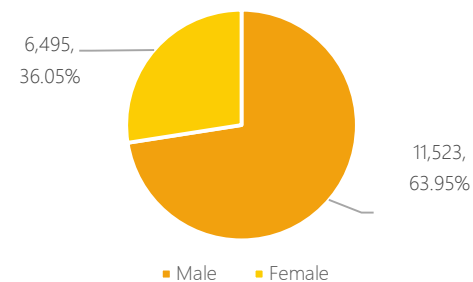
Domestic and Foreign employee proportion of COSCO SHIPPING Lines of 2017



Employee Age Group of COSCO SHIPPING Lines of 2017 (Unit: Person)



Gender Statistic of COSCO SHIPPING Lines of 2017 (Unit: Person)



decisions. We have a separate resignation talk to each of the resigned employees to understand the reason for the resignation. When employees resigned, we handle their resignation according to law.

At present, male employees account for 63.95% of all employees, while female employees make up 36.05% of all employees. This is reasonable due to the particularity of the shipping industry which is relatively higher risk and require greater physical exertion for many positions in land yard, ports, docks, etc. Therefore, higher proportion of male staff is normal. Nevertheless, we still attach great importance on females and would like to broaden the employment channels for them.



We care about our female employees. The trade unions formulated the *Special Collective Contract for Special Materiality issues of Female Employees* and arranged gynecological examinations for female staff annually. Women workers over 45 years old will get extra inspections once a month, and all female workers will get monthly special health and labor protection fees of ¥100 (i.e., sanitation fees) for female workers. We also set up "Love Mummy Cottage" to monitor the situation of female workers during pregnancy and provide private, comfortable and convenient place for pregnant women and mothers in lactation period. This cottage received a lot of positive feedback. In addition, we provide equal remuneration for men and women for equal work, guaranteeing a 1: 1 basic wage income for male and female employees in the same level of position.

We work hard to maintain good relationships with our employees. Trade unions, as labor representatives, signed the Collective Bargaining Contract with the general manager and establish a labor dispute mediation system. Domestic collective

contract staff coverage is 100%. In the event of labor disputes, the union will mediate and provide legal services. If it is necessary to resign staff according to law, we will explain the situation to the trade union or all staffs. We have also set up a system of democratic management of employees and hold a meeting of employees every year to listen to the reasonable suggestions from staffs. When it comes to major corporate decisions, we use the workers' congress, local area network, newspapers, posters and other means to notify all employees.

Respecting the equality and diversity of employees and maintaining good relationships with them are fundamental for the steady development of the enterprise. Each employee plays an important role in his/her respective position. Employees of different ages, races and nationalities get together to create a prosperous future for us and to form a charming humanistic landscape. We care about female employees and their career path. We regard good relations with employees as the balance of business development. Once the balance is broken, our future development will be affected.



# Creating a Warm Working Environment

In order to provide our staff with a warm working environment, we have established system of vacation and insu employees' benefits. Based on "Create Value, Develop Together" concept, we have formulated the Employee Pamphlets and Labor Insurance Management Procedures, which defines employees vacation system and implemented paid leave, maternity leave, family visits leave and so on. This aims to help easing the pressure on employees' intense work and enhance the cohesiveness of the team. We provided employees with various kinds of benefits such as daily lunches, annual medical examination, and enterprise annuity system in accordance with the relevant state policies which will provide retired employees with guaranteed income.

We have also set up a sound social insurance system to handle pension, medical treatment, work injury, maternity insurance, unemployment insurance, housing fund, supplementary housing fund and traffic accident insurance (commercial insurance) for employees according to the provisions of the state and local governments. The payment rate shall be in accordance with the provisions of the state or the place where they are located. We withhold and pay the personal insurance on behalf of the employees.

We provide employees with a variety of activities to relieve them of stress after work. We have a gym in our company to ensure that our employees can strengthen their physical fitness while they work; we have also created different associations such as baking, reading, chorus, table tennis, etc. The employees can choose to join different associations to enrich their spare time, better integrating into our family.

In addition to holiday, insurance and welfare benefits, we also organized various employee activities both at home and abroad to enrich their lives and created a harmonious and warm working environment. In 2017, we carried out a variety of employee activities, for example, walking activities and art shows. We also invited employees working in overseas ports to attend Christmas parties.



## ◆ Case: Held the "Joyful and Concerted, Concerted, and Forgetting Together"

In order to allow employees to experience sports enthusiasm and release work pressure, COSCO SHIPPING Lines held the "Joyful and Concerted, Concerted, and Forgetting Together" event in October 2017 to mark the employee's Happy Health Day. A total of 240 athletes from 9 companies, including headquarters and related subsidiaries, participated in the event. During the event, employees of the various units competed on the field, entered each other and enjoyed the passion and joy of sports. The team members of the same team participated in a concerted effort to show the team's charisma and gain the team's friendship.

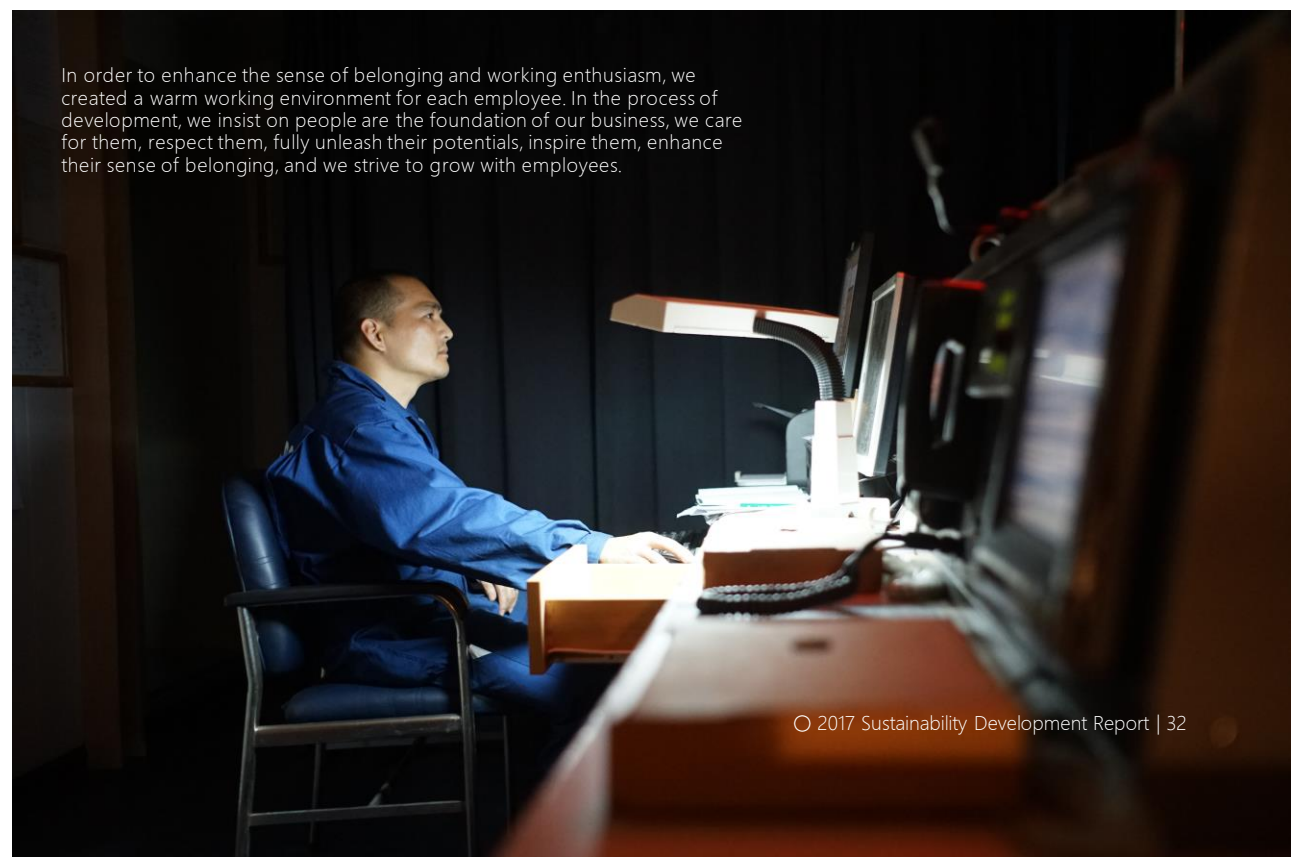


## ◆ Case: Held "Remembering 2016 and Looking Forward to 2017" cultural activity



In March 2017, during the celebration of the first anniversary of COSCO SHIPPING Lines, we organized a variety of literary and artistic activities with the theme of "Remembering 2016 and Looking Forward to 2017", demonstrating our united and energetic spirit and culture.

In order to enhance the sense of belonging and working enthusiasm, we created a warm working environment for each employee. In the process of development, we insist on people are the foundation of our business, we care for them, respect them, fully unleash their potentials, inspire them, enhance their sense of belonging, and we strive to grow with employees.





## Creating the Positive Social Image of the Enterprise

In terms of compliance management, we, as an international large shipping company, attach great importance to the establishment of a clean and honest image. In May 2017, the "Belt and Road" International Cooperation Summit was held in Beijing. At the opening ceremony, General Secretary Xi Jinping proposed to strengthen international anti-corruption cooperation, strengthen corporate self-discipline and prevent and control corruption risks, and make the "Belt and Road" become a path to integrity. In 2017, we launched the "Corruption Education Month" campaign, highlighted the negative warning education, and handled complaints from the Petition and Visiting cases, with a disposal rate of 100.00%. In terms of procurement compliance, we have formulated the "Supplier Management Measures", which puts forward clear requirements for the selection, management, supervision and punishment of suppliers.

In terms of social public welfare, we actively responded to the call of the country and implemented accurate poverty alleviation. In 2017, COSCO Marine Container Lines invested RMB 4,631,300 for precision poverty alleviation. Targets for poverty alleviation include Wenxiang Village in Zhanjiang City, Yongde County and Linkou City in Linyi City, Sitaizi village and other poor areas. We provide village and township infrastructure construction and school refurbishment services in these areas to make a contribution to local poverty alleviation work.

In terms of providing local job opportunities, companies also undertake the important task of solving the social labor force and stabilizing the harmonious development of the society. At present, the employment issue is still highly concerned by various countries. In 2017, COSCO Container Lines created 13,634 formal employment opportunities in the country, and 4,212,300 formal employment opportunities were created overseas. In total, it created tens of thousands of job opportunities that indirectly created 6,301 informal labor employees at home and abroad. When we expand overseas, we attach great importance to the employment and training of local talents, and pay attention to the creation of indirect employment opportunities and the employment of disabled persons. For example, the terminal company in Kumpport, Turkey, indirectly created more than 5,000 job opportunities for outsourced workers in 2017 and provided jobs for 18 disabled people.

In the following three chapters, you will read what we have done in advancing anti-corruption work, implementing precision poverty alleviation, and providing local employment opportunities.



# Carrying Out Anti-corruption Work and Implementing Anti-corruption

## 1) Conducting anti-corruption work

We insist on integrity management and have zero-tolerance towards bribery and corruption. We formulated several regulations since 2017, such as "Three-Importance & One-Greatness system of COSCO Shipping Lines.", "Guidance on Serious Business Operation Discipline (Version 2017)", "COSCO Shipping Lines Subordinate Units Nominated Inspection Methods for Secretary of Commission and Vice Secretary (Trial)", "CPC COSCO Shipping Lines Regulations of Procedure of the Commission for Discipline Inspection (Trial)". At the beginning of each year, we convene anti-corruption conferences to deploy the anti-corruption campaign in the whole year, and then we break down our anti-corruption tasks into specific units and departments. Furthermore, we notarize and implement responsibilities through signing the Statement of Liability and Integrity Agreement.

We insist on daily education and incorporate anti-corruption works into daily routine by organizing activities such as internal and external anti-corruption caution cases study. For instance, we promulgate integrity information every week through "Weekly Events" and publishes articles about probity and integrity every month through "Integrity Window" and "Sailing of Integrity" to ensure messages about integrity can be spread to staffs every week. All of our subsidiaries must participate in these anti-corruption building activities and we would also disseminate the thoughts of anti-corruption to every subsidiary. They would publish anti-corruption articles in their internal journal to share integrity stories and disseminate anti-corruption thoughts to their teams. For instance, COSCO Container Shipping Co., Ltd. publishes special issue called "Yue Xue" while Shanghai Ocean Shipping Co. Ltd. publishes special issue

called "Qing Feng". In order to improve the integrity awareness of cadres, the Company organizes professional integrity knowledge quiz and interviews before new cadres are being promoted.

We establish anti-corruption impeach phone number and email to encourage staffs to report corruptions identified. We accepted 48 prosecution petitions with 100.00% handling rate and 90.00% completion rate in 2017. 5 petitions carried forward from previous year were settled. 7 cases of Party Conduct Registration were investigated and completed. 3 members were expelled from the Party and 4 members received inter-Party warning through discipline review. 5 employees were dismissed; 6 have received reprimand letters, 21 have received verbal warning and 20 have received reminders. Eventually, the Company retrieved economic loss of total amount of RMB 638,600 which were confiscated from illegal proceeding.

Anti-corruption is related to the development of our business. Throughout the history, thousands of cases showed us how organizations fell from its most glorious day to the darkest moment after the malversation was uncovered. As ancient wisdom said "To have the ability to flow farther away, you must focus on building its core." We must cut off and resist thoughts of corruption from the source to build an honest and integrity cadre team. As a large state-owned enterprise, the behaviors of COSCO SHIPPING Lines attract high attentions to employees, government and the society. Therefore, our Company should play the leading role in anti-corruption activities in the whole industry and provide satisfactory results to the public and the country. The road of anti-corruption is long, and we bear heavy responsibilities.



## ◆ Case: Integrity month

In September 2017, we conducted Integrity Month activities with theme of "*Build and Advocate Integrity*" with different kinds of educational programs and substantial contents to help Party members and employees improve their awareness of integrity. For example, we organized 115 group studies, 105 Party lectures, 129 integrity working symposiums and 19 special tutorship seminars. There were more than 5,700 employees participating in professional integrity knowledge Q&A activities. We also organized 55 visits to Anti-corruption Education Base with over 1,280 employees participating and broadcast the anti-corruption education film for 254 times for over 5,090 employees. During the activities, the Company collected 143 paintings, 91 photographs, 70 solicit articles and 272 mottos. This Integrity Month helped our Company to expand the education, promulgate our core value, gather positive power and further promote the Party cadres' discipline and integrity awareness.



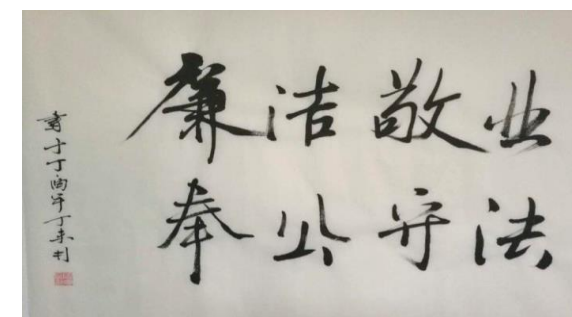
The Commission for discipline inspection organizes a total of 39 people visited the Shanghai "East first Tilanqiao prison".

## 2) Ensuring procurement compliance

Large shipping companies focus more on the compliance of supply chain and its influences on environment, society and economy. In order to supervise and control risks and maintain health of the whole supply ecosystem, COSCO SHIPPING Lines formulated Vendor Management Regulation which requires vendors to conduct business based on the applicable laws and regulations.

We improve the purchasing system and build vendor qualification review system to select qualified vendors for further verification by the specific review team. The contents of qualification review mainly include background information of the supplier, its main achievements, capability of supply and service guarantee, capability of quality assurance, customer service scheme and compliance history. These qualified vendors will appear in the vendor list, and purchasers can only select the vendors from the approved list.

Based on vendors' reputation and service quality, we grade vendors into five levels from A to E. We will preferentially cooperate with those vendors in higher level with good reputation, quality and environmental protection policy. For those Level E vendors, elimination process is implemented and they will be banned from doing business with COSCO SHIPPING



Qingdao branch - Sui Minglei calligraphy works "honesty and dedication respect justice and abide by the laws"

Lines in three years. For those vendors who have committed commercial fraud, corruption, business misdeeds, poor credit records, poor product and service quality and security threat, we will blacklist them and will never cooperate with them. Internal Audit department monitors the whole purchasing processes to make sure fair and impartial vendor management. We adhere Purchasing Management Regulation and insist on sustainable development and build healthy strategic partnership with vendors to achieve mutual benefits and development. 7,863 vendors exist on the list in 2017, they are classified into four categories: Port & Pier, Agency, Sewage Disposal and Services.

Purchasing plays a significant role in affecting the cost and operation of a business. The variety of items to be purchased is quite long, the purchasing process is highly complicated and compliance risks existed everywhere. It will require experienced purchasers to exercise their judgement to verify the qualified material, control the procurement processes strictly in order to lower the compliance risks. It is a wise decision to ensure sustainable procurement for the Company based on purchase compliance to develop the strategic cooperation with the vendors, which would achieve win-win situation with cost saving.



# Taking Targeted Measures In poverty Alleviation

Yongde County is a small town located in Lincang Prefecture of Yunnan in the southwest part of China. It has a population of 370,000 and a total area of 3,296.00 m<sup>2</sup>. Yongde lies to the east of Nu River and west of Nanting River. The county is remote and with bad traffic due to the fact that 95.00% of the total area are mountains. The available cultivated land area accounts for 2.24% of the total area due to the precipitous nature, although the land is fertile and the weather is sunny.

Yongde has been identified as a national-level impoverished county with 1/3 of its residents living under poverty. The economic development is with difficulty owing to the aggregated negative effects from topography, communication and economy. According to the data from the National Bureau of Statistics of China concerning household income, expenditure and living conditions, and the per capita disposable income of residents in Yongde is RMB 4,818 for the first half year of 2017.

We allocated specific fund to help the residents in Yongde County to live out of poverty and fulfilled its corporate social responsibility. Most importantly, this action worked in consistent with the state's call for "Taking targeted measures in poverty alleviation". Under the arrangement of COSCO SHIPPING, our subsidiaries and we took active participation in the work of poverty alleviation. It has been 7 years since the framework agreement signed with Yongde County that we committed to allocate educational resources to Yongde in the name of a program called "Wishes of Spindrifts".

In 2011, we signed the framework with Yongde County to implement "Wishes of Spindrifts" and till now the support has been lasted for 7 years. During these 7 years, our employees made donations to the construction of cafeteria and supported the educational work in three primary schools: Mingxinba, Niuhuotang and Jianshan Primary School. Moreover, in order to expand their exposure, we also invited children for the summer sailing camp to see the world outside. In 2017, we allocated RMB 200,000 for the "Wishes of Spindrifts", and took targeted measures to help 59 students to live out of poverty.

Apart from the "Wishes of Spindrifts", we also do charity work to improve the economic condition in Yongde. We helped Yongde to build channels to attract investments from outsides. After that, Yongde sold 12,104 boxes of local tea and earned RMB 2,090,000.

The stability and development of our society is the safeguard for our Company. Our development heavily relies on the support from our society and responsible companies should make contributions to pay back. In promoting COSCO SHIPPING Lines' globalization, we pay attention to the economic benefits on the one hand and care about our society on the other hand. In the field of corporate social responsibility, we still have a long way to go as a world-class enterprise.



## ◆ Opinions

"I volunteered myself to be a teacher in Yongde. I saw many children whose parents are working in the cities and they are left behind in the hometown. I hope I can make some impacts and change them. I shared positive attitudes and helped them to build their dreams. I delivered them study skills and passion as well. The performance of the class I taught improved a lot; they moved up 4 places in term of the enrolment rate. Their destinies have been changed in some way."

——Xifeng Sun, volunteer teacher of Yongde from our Global Information Service Company

"As a state-owned enterprise, we will not hesitate to do good deeds to fulfill our social responsibility and being committed to the call of our party. In the process of developing "Wishes of Spindrifts" program, we were deeply moved by students who work hard to exit from poverty and chase their dreams."

——Qingqin Liu, participate of the poverty alleviation program from our shipping company

## ◆ Our story

"At the beginning of 2014, after 10-hour bus journey we came to Yongde to meet a little girl from the local family. Another little boy suddenly began to cry when we walked in, the parent said they were too poor to support him to study in high school. We decided to help him immediately. It turned out to be the best decision that I have ever made. In 2017, the boy was admitted to study in a medical college outside his hometown after all the hard work. Now I still donate RMB 5,000 every year to help him realize his dream."

——Hao Ge, participator of "Wishes of Spindrifts" from our Shipping Lines company



Xiaobing Li, whose dream is to be a doctor, is now studying in Chuxiong Medical College supported by Hao Ge



# Providing Employment Opportunities for Local Communities

Panama Canal, an important channel connecting the Pacific and the Atlantic Ocean, is one of the Seven Wonders of the World, and also known as "the Bridge of the World." The Panama Canal is an important "global trade barometer" for the maritime community. Each year, the Panama Canal hosts approximately 6% of the world's maritime trade. On June 26th, 2016, the opening ceremony for the new lock for the ships was held in the Panama Canal. COSCO SHIPPING Panamax would be recorded in history as the first new Panamax ship to pass the new lock.

The development of the canal is inseparable from the contribution of talented people. The Panamanian government attaches great importance to the training and development of marine personnel and has always maintained close cooperative relationship with us. From 2006 to 2017, many Panamanian local universities, such as Panama Maritime University, have cooperated with us to build seafarer internship programs. Each year, local universities deliver 3-5 interns coming to work at COSCO SHIPPING Lines (Panama) company so that they can gain some real experience on maritime shipping work. For each trainee, we pay for their living expenses and safety insurance on board every month. During the internship, interns can learn knowledge outside of textbooks. Many interns received a formal job offer and became part of us after the program. Now, many of them have grown as our business backbone.

In 2017, COSCO SHIPPING Lines (Panama) Company had 62 full-time employees and provided 3 internships for local students. Although the size of the company is small, but they concern a lot about providing internship opportunities for local college students. Many of our subsidiaries around the world do the same thing in the local communities.

Providing job opportunities for local communities and cultivating local talents are the responsibility of a multinational corporation. This can improve the local employment rates and ease social conflicts. We provides employment opportunities for the Panamanian region and for other COSCO ports across the world. This is the principle that we adhere to. As the world top shipping company, we will continue to adhere to this principle of creating employment opportunities and making contributions to local communities when we execute our strategy.



SaSasha Algandona, an intern from Panama Maritime University. She has grown to be an important employee in the control center.

## ◆ Opinion

"Providing internship opportunities for local students in Panama is good for both the students and our businesses, which is a win-win situation. We recruit students from both society and universities; cultivate them to be our talents which meets the needs of our business. "

——General Manager Xu Zicao from COSCO SHIPPING Lines (Panama) Company

## ◆ Case: Panamanian President visited COSCO SHIPPING headquarters



Panamanian President visited COSCO SHIPPING headquarters

"On June 12, 2017, Panamanian President Juan Carlos Barrera Rodriguez delivered a televised speech announcing the establishment of diplomatic ties with China. On November 21<sup>st</sup> of the same year, President Barrera was on a state visit to China. He visited COSCO SHIPPING Headquarters and held talks with COSCO SHIPPING Chairman Xu Lirong. During the meeting, Chairman Xu Lirong said that it is necessary to strengthen and improve the training and cooperation mechanism between COSCO SHIPPING and Panamanian Maritime University, and work hard on the Internship training for students from Panama Maritime University."





## Protecting the Marine Ecological Environment

Marine transportation business can have a great impact on the marine environment, such as carbon dioxide and other greenhouse gas emissions, garbage from vessels, loading and discharging of ballast water, etc. Failure to institutionalize the management of these acts will lead to pollutions of the marine environment and destroy the biodiversity. Among these problems, the issue about biological invasion caused by ballast water is arousing the concern of all stakeholders in the world.

COSCO SHIPPING Lines pursues both economic benefits and corporate social responsibility to fulfil the requirements of environmental protection in Global Compact. Based on the guideline, company should advocate "*Comprehensive management; Treasure resource; Protect environment; Behave as social responsibility undertaker to protect environment, treasure earth resources, support and participate in environmental protection activities, and improve the our environmental protection system actively.*" We regard that security and environmental protection are important parts of our business. Some subsidiaries have already applied the ISO14001 Environmental Protection Guideline, established and operated environmental management system which are verified by the third party certification agent. Meanwhile, all the shipping lines have already applied the ISMC International Security and Anti-pollution Regulation and established a security management system.

In 2017, we deepened the energy saving and emissions reduction effort continuously and we also paid close attention to new requirements of energy conservation and emissions reduction in International Covenant. We strictly abide by the Implementation Plan of the Ship Discharge Control Zones in the Pearl River Delta, Yangtze River Delta, and Bohai Rim (Beijing-Tianjin-Hebei) Waters, as well as the requirements of ECA for the use of low-sulfur fuels under the MARPOL Convention and USCG, and guide ships to formulate specific measures and do a good job in air pollutant emission control. We actively developed energy saving methodology in respect of technology, operation and management. We generalized IOP projects and flight fuel inspection, and built the Green Intelligent Shipping System.

In the management of ship ballast water, we have formulated relevant regulations to ensure that the ship's ballast water is properly loaded and unloaded, and to minimize the introduction of exotic species into local waters during the shipping process. The specific measures include the four operations of ballast water operation, replacement, safety inspection and record.

The fleet's total shipping capacity ranks among the top five in the world's merchant shipping fleet. It is a world shipping country with a huge presence. The shipping fleet and ship transportation have played an important role in the economic development. After the outbreak of the financial crisis in 2008, the world shipping industry has entered a stage of downturn, and the dismantling of old ships in the world has accelerated. As a result, safety, environmental and health problems caused by ship dismantling operations have arisen. As one of the major shipbreaking nations in the world, China has always advocated "green shipbreaking" and has made unremitting efforts for it. As the largest container transportation company in China, we responded to the call of the country and actively advocated and implemented the green dismantling method. We implemented strict standards in the selection of suppliers for the shipbreaking business.

A healthy marine environment is the basis for the sustainable development of the shipping industry. Therefore, strict management is required for ship sewage and garbage. We attach great importance to the pollution caused by shipping activities to the environment. We strictly require ship personnel to act in accordance with the Waste Management Plan and the Operational Regulations for the Handling of Oil Sewage Disposal by Container Ships of COSCO SHIPPING Lines. The negative impact of the environment is minimized.

In the next four chapters, you will read about our efforts in practicing green shipping, managing ship ballast water, pursuing green ship recycling, and environmentally-friendly disposal of Waste Oil.

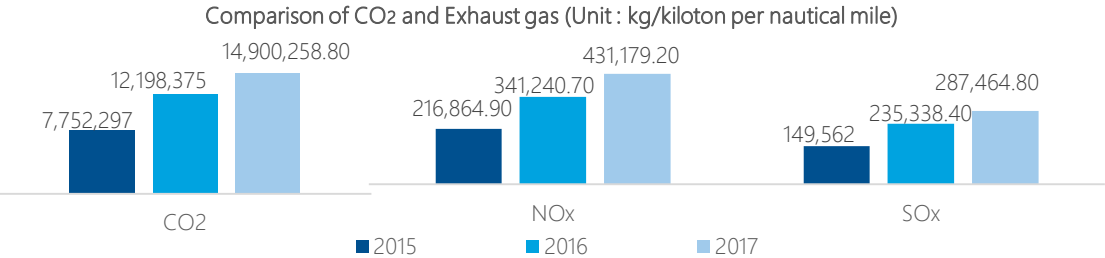
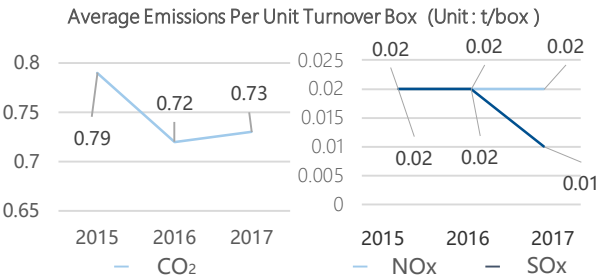


# Practicing Green Voyage of Shipping

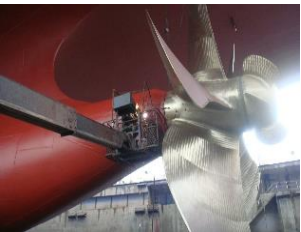
The global shipping companies and governments are facing challenges in reducing carbon dioxide emissions. In 2017, Ministry of Transport of the PRC Government published The Transportation of Energy Saving and Environmental Protection "13th Five Years Developing Plan" to announce that the energy consumption of shipping ranks only second to highway transportation, occupying over 20.00% of total energy consumption. Therefore, the shipping industry faces an arduous emission reduction task. We must optimize energy usage structure, reduce fuel consumption, and reduce greenhouse gas and pollutant emissions to support the low carbonization process. This action also could support China to tackle climate change and relieve the contradiction between energy supply and demand. The disclosed data of 2017 fuel consumption, greenhouse and waste gas emission were based on the owned and rented vessels using our purchased fuel in container shipping business.

The global economy situation was revitalizing and the market of shipping industry was recovering in 2017. As the largest container liner shipping enterprise in China and the fourth largest in the world, our fleet has increased by 43. Due to the increasing numbers of vessels and business revenue, the usage of diesel had seen 22.77% annual growth and fuel 22.13% annual growth. The amount of carbon dioxide emissions were 14,900,258.80t with 22.15% annual growth. Nitrogen oxide emissions were 431,179.20t with 26.36% annual growth. Oxysulfide emissions were 287,464.80t with 22.15% annual growth. The container liner shipping covers 99.00% of the energy used in our business and the increasing energy volume has led to an increasing trend of exhaust gas and carbon dioxide emissions. Therefore, we established the optimal fuel usage management as the main method to achieve the purpose of low carbon voyage.

In order to achieve our target of "Energy Conservation and Emission Reduction, Low Emission and High Efficiency", we formulated several regulations such as "Energy Review" and "Environment Review" to help us evaluate the situations of energy usage and environment impact. At the same time, we established and implemented Energy Management System and divided energy saving measures into three aspects: technology, management and operation. In terms of energy saving through technology, we promoted the implementation of ship energy efficiency system. We have received ¥25.17 million from Ministry of Transportation of the PRC as a reward for the successful implementation of the "The Transformation of COSCO SHIPPING Lines 10,000TEU Level Container Ship Receiving Shore Electrical Devices project". In terms of energy saving through management, we enhanced fuel management and control to expand the scope of IOP projects. We published "Fuel Management Weekly Report" and "Fuel and Lubricant Management Monthly Report" regularly; all ships also adopted the "Unannounced Inspection of Fuel Oil" to trace daily usage and remaining stock of fuel. In terms of energy saving through operation, we completed and improved the inward/outward automatic update system and the optimal operation practice guideline continuously. Meanwhile, we promoted our ships to bunker in Russia Far-East Port. With these actions implemented, we have optimized the energy system which led to continuous and efficient energy management.



## ◆ Case: Transformation of ship bulbous bow and propellers



Transformation of Propellers



Transformation of Ship Bulbous Bow



Transformation of Ship Bulbous Bow

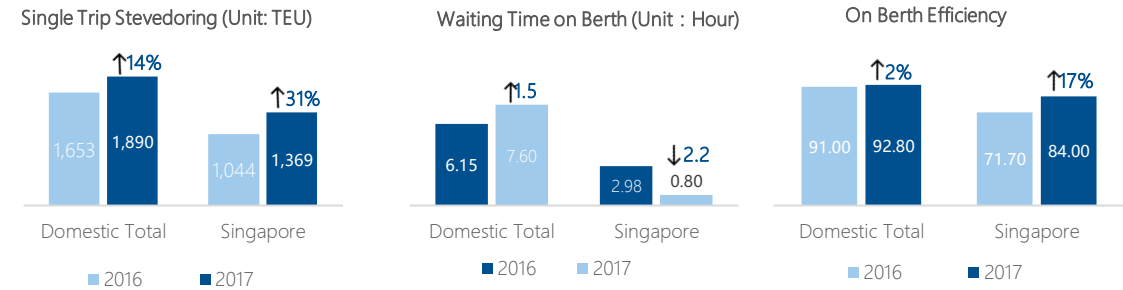
Navigating in the ocean must consider air resistance, friction force and wave resistance from water. From the perspective of energy consumption, ships must burn more fuel to increase power to overcome wave resistance. Therefore, lower waves lead to lower energy consumption. Ship bulbous bow is the design to reduce wave resistance. The waves created by bulbous bow combine with other waves could reduce wave resistance by the convergence of the crest and the trough. The transform and upgrade of bulbous bow will save energy for later usage. In 2017, vessels in our "COSCO Asia", "COSCO Europe" and "COSCO America" have already finished the transformation of bulbous bow and propellers. Vessels in "COSCO Africa" has already finished the transformation of bulbous bow and 6.50% of fuel saving was expected.

## ◆ Case: Advance the breadth and depth of IOP

With the revival of shipping market in 2017, the volumes of container handled and the workload at the ports have been substantially increased. This caused a crowded situation at the ports, especially those in Far-East area, and waiting time, berthing time and time on berth are increased. In this case, MOC enhanced the implementation of IOP (Improvement of Operating Productivity) in domestic ports. Meanwhile, MOC extended the IOP to overseas with both Singapore PSA port and HK HIT port. We advanced and implemented IOP in 9 areas of Far-East, 11 ports and 19 wharfs to optimize schedule of voyage. It improved our shipping on berth rate and operation rate on port, decreased ships operation time on port to ensure the ships can embark on schedule so that our clients could receive the goods on time.

During the implementation of IOP, we observed the operation on site to identify the potential problems that may obstruct the critical processes in port operations and shipping agency operations. Through analyzing the problems and key operation quality index, we communicated with port, shipping agency and other shipping personnel timely to improve the process optimization measures. Meanwhile, we controlled relevant key operation index by ship, by schedule and by operation step and guided relevant employees to improve their work.

Our IOP project achieved remarkable success in 2017. First of all, we had great improvement of operation efficiency and stayed ahead of the industry. In domestic, there was a 14.00% increase in single trip stevedoring and 2.00% increase of efficiency. At overseas ports such as Singapore PSA port, there was a 31.00% increase in single trip stevedoring, 17.00% increase of efficiency and 2.2 hours reduction of on berth time.



Moreover, we confirmed key responsibilities and working standards of shipping agents. Based on the shared targets with ports, project team optimized the work of shipping agents. Through early involvement in the berth plan, resource investment, stowage coordination, vessels in the berth working processes control and results analysis after shipment, we improved berthing and stevedoring to achieve the controllability and visualization of all berth operation. Last but not least, we

regulated and optimized the processes and requirements of vessels working in the berth. The efficiency of loading/discharging has close relationship with vessels' cooperation. For this purpose, our project team raised the working processes and requirements for loading and discharging in the berth, and sent guideline to the vessels. All vessels must focus on work efficiency and cooperate with us actively.



Besides, we also pay much attention to the situation of water usage in vessels. We worked hard on desalination by using the waste heat from the equipment to produce fresh water to for usage of living and equipment. This helped us to decrease the pressure of getting replenishment of fresh water on shore. Besides, we insisted on promoting employees' awareness and habits of water conservation and encourage them to optimize

utilization of shipping water usage. For instance, our employees won the 2017 China Transportation Industry Excellent Achievement Award for the improvement project of COSCO ASIA drinking water system. The fresh water consumption amount from our fleets of vessels was 276,163.30t, including living water usage of 204,988.70 t and the amount of desalination was 71,174.60t.

◆ Case: Expanding the ship's "Unannounced Inspection of Fuel Oil"

In 2017, we intensified the inspection of fuel flow inspections and the monitoring of oil spillage and sewage, and achieved full coverage of the monitoring of oil spillage of domestic ships, through the implementation of high deterrence, high -density flight oil inspection and seal management. The fuel management effect of ships has been significantly improved. Since February 2017, we have promoted the sealing and management of the outlet valve of the oil sewerage system, and began to implement the sealing and management of the inlet valve of the vessel refueling system since June. In terms of fuel flow inspections, we completed a total of 1,878 fuel-inspection flights in the year. Among them, 1,501 ships were discharged from the inspection and inspection of large e-scale ships' oil wastes, and 188 ships were monitored for the acceptance of barges for oily sewage. The oil inspection monitored 189 ships and refueled and reviewed 298 ships. In terms of Shifeng management, we completed a total of 1,447 inspections of oil effluent sealing and sealing operations and completed 1,881 refueling and sealing operations for a total of 4,110 sealing points; in 2017, we strengthened the supervision of the withdrawal of oily wastewater. Implementing measures such as the management of oil wastewater application, the proportion of oil sewage is effectively controlled. From January to December of this year, the proportion of oil wastewater was basically controlled at a stable level of about 1.6%. In 2016, the proportion of oil wastewater decreased by approximately 19.8%. Obvious results.

◆ Case: The construction of a green ship "COSCO Shipping Kilimanjaro"

On December 22, 2017, the "COSCO Shipping Kilimanjaro" container ship of 14,500 TEU container ships shipped by COSCO SHIPPING Lines was officially delivered. "COSCO SHIPPING KILIMANJARO" is a new type of container ship that COSCO SHIPPING has just put into operation. It is also the first energy-efficient intelligent ship approved by China Classification Society in COSCO SHIPPING. The length of the ship is 366 meters, can carry 14,500 TEU, and load 154,520 tons. The maximum draught is up to 15.50 meters.

COSCO SHIPPING Kilimanjaro is a green ship that realizes intelligent energy efficiency management. In order to comply with the development concept of energy saving, emission reduction and green environmental protection, the ship reasonably selects technical parameters and equipment configuration according to actual operating conditions to reduce fuel consumption and emission levels. The ship has greatly optimized the ship's design, equipped with long-stroke high-efficiency main engine, auxiliary exhaust gas economizer, high-voltage shore power system, ballast water treatment device and energy efficiency management system and other latest equipment and systems, significantly improving



fuel economy. The ship energy efficiency design index (EEDI) is 8.0, which meets the MARPOL Convention's 2030 target requirements in advance. The ship also has a green ship classification symbol, meet the "Hong Kong Convention", and was awarded the i-Ship (E) smart energy efficiency management symbol by CCS Classification Society, and realized intelligent ship management.

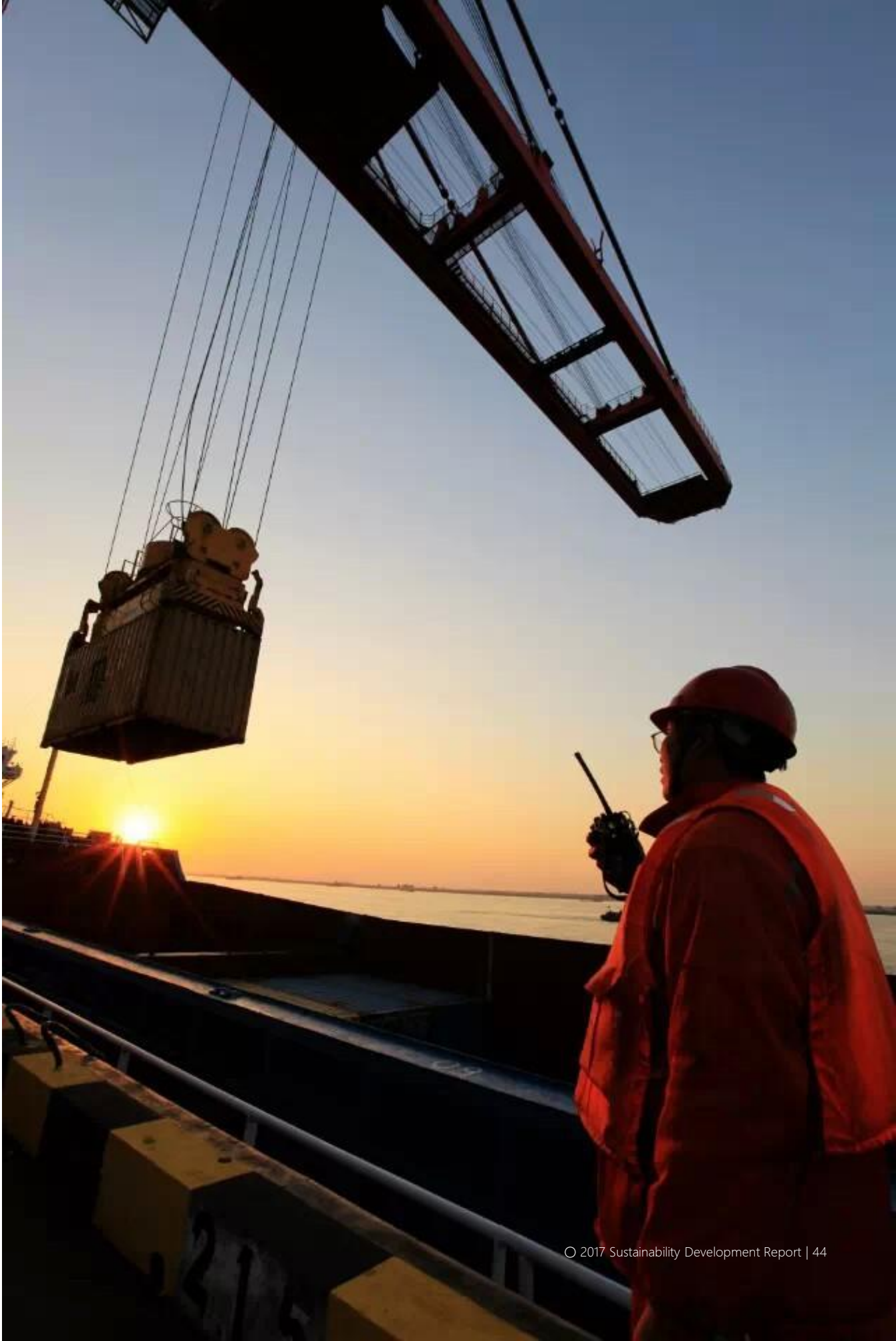
◆ Case: Improvement of drinking water system in COSCO ASIA to reduce fresh water refill expenses

COSCO ASIA fleet is a series of ultra-type of vessels produced by Korea Hyundai Industrial Ulsan Shipyard, which could carry 10,062 TEU and is currently serving the American Western - Asia - Mediterranean routes. This type of vessel does not install specific drinking water equipment. Its drinking water system is mixed with living water system, and the drinking water system cannot be separated with the water generator. It will make drinking water contains less mineral substance that can affect sailors' healthy. During the actual shipping operation, sailors must rely on the port to supply fresh drinking water to them which increases the shipping operation cost. Therefore, the sailors in the vessels of this type formed a project team to analyze sailing schedule, fresh water consumption, equipment on the vessels and sailors' health, then they formulated a project to reconstruct the pipes of fresh water tank and separate the drinking water system from the living water system to ensure drinking water quality and sailors' health. The transformation of pipes could help us to reduce the operation cost by ¥75,000 for refill of fresh water expense per vessel per year and ¥300,000 for four ships in total.



It could not only reduce our fuel usage and cost, but also reduce the emission of carbon dioxide which directly relieve greenhouse effects. We encourage employees to propose optimal solutions for water saving to reduce operation cost. As the largest shipping enterprises in China, it is important for us to be the role model of the industry by generalizing and promoting green voyage practice, and paying effort to the reform of the energy structure in China and making contributions to tackle global warming.

We advocate the idea of Green Voyage. We optimize fuel usage from three aspects: technology, operation and management.





# Managing Ballast System

Loading and discharging of the ballast water has a large impact on marine biodiversity. When a ship is loaded with ballast water at the port of embarkation, the water in the ballast tank may carry thousands types of marine organisms such as bacteria, microorganisms, and invertebrates, etc. They can enter the ballast tanks through seawater filters and ballast pumps, and can stay alive even during a few months of voyage. When the ship unloads the ballast water at the port of destination, these marine organisms will be discharged into the waters of the port of destination to form an alien species invasion. These exotic species are responsible for the breeding of harmful aquatic organisms and pathogens, posing a serious threat to local people's health, animals' and plants' survival, and the marine ecosystem.

For the loading and discharging of ballast water, COSCO SHIPPING Lines has established a strict system to standardize the management. We have formulated policies and guidelines such as "Ballast Water Management Guidelines" and "Ballast Water Management Plan" to prohibit any act of violation of the conventions. Specifically, we manage the ballast water through four links, namely operation, replacement, safety inspection and record of the ballast water, to ensure the protection of marine biodiversity namely.

We require that all ships should try to avoid loading the ballast water in restricted areas and places, such as areas where pathogens and pests spread and breed. We also require the crew to clear the ballast water sediment in time, and at the same time, to avoid unnecessary ballast water discharge under the condition of safe cargo handling.

Operation

When we need to replace the ballast water, our ships should replace it in the location where is at least 200 nautical miles from the nearest land and at least 200 meters deep. In exceptional cases, the ships should be replaced in water as far away as possible from land, and at least 50 nautical miles from the nearest land and at least 200 meters deep.

Replacement

We require the Captain to pay close attention to sea conditions and weather to ensure that the ballast water is replaced in good weather. The safety inspections of the ballast tanks should be conducted regularly to ensure the ballast water treatment equipment is in good condition.

Safety inspection

On each ship, there will be a designated crew who records the operation of the ballast water in the "ballast water record book", and each operation record is signed by the Chief Officer, and each page is signed by the Captain. The "ballast water record book" is in the form of bilingual leaflet, and is kept for at least two years to be examined by the authorities. In addition, we require the Captain to be familiar with and comply with the port's reporting system on ballast water, and actively cooperate with local port authorities for inspection and sampling.

Record



## ◆ Knowledge Tips: What is ballast water ?

Ballast water means the water and the suspended substances contained in the vessel for the control of draft, trim, heel, stability or stress. More colloquially, when a vessel is offshore, the ballast tank will be loaded with ballast water, so that the vessel can keep afloat steadily in the water. For example, when the vessel is empty, its stability and draft cannot meet the safety requirements, therefore it needs to load the ballast water to adjust the vessel's floating state. When the ship is unevenly loaded, its local force is too large, and it needs to use ballast water to balance the stress state.



71% of the earth's surface area is the ocean, and as an important component of the earth's biosphere, the ocean is the home of various marine organisms and a treasure-house of biodiversity. Our 355 lines of container business, covering five continents and 90 countries, have a great impact on the marine ecosystem. Therefore, it is our responsibility and mission to protect the marine biodiversity and marine ecosystem. In the process of container transportation, we conduct real-time monitoring on ballast water and strict management on ballast water discharge in order to complete our shipping tasks on the premise of ensuring the protection of marine ecosystem. This is the most fundamental attitude and the most important responsibility we should take for our future generation as a shipping enterprise.



# Disposing Vessels in a Green Way

When vessels reach their end of life or need to be disposed due to other reasons such as termination of operating license they will be dismantled. More and more vessels are dismantled and recycled due to the increasing demand for recycled steels and overcapacity in container shipping industry. Ship-breaking business plays an important role in the cyclic development of the shipping industry. The steel recycled from dismantling vessels is essential in alleviating the pollution of marine environment.

In the past, ship-breaking business could bring about side effects not only in social aspects but also on the protection of environment. For example, in the process of breaking ships on the beach, as there is no crane available, workers have to use simple tools to do the cutting. Moreover, worker are exposed to noxious gas without having any protective masks, which pose a threat on their health and safety. Nowadays, some companies begin dismantling work without proper certification, the garbage brought about could cause environmental pollution and mismanagement could give rise to incidents.

We actively responded to the State's call for "Green Ship Recycling" and chose the leading ship-breaking company and handed over one of the vessels that reach the end of its life for dismantle. The reason why we chose this company is that its

ship-breaking business is conducted in accordance with the *Hong Kong Convention* and regulation enacted by the Europe Union in terms for breaking ship in a safe and less polluted way. Moreover, it also strictly complies with the rules underlying in the *General Regulation Green Ship Recycling* established by National Development and Innovation Committee of PRC, and it promotes the concept of breaking ship in a safe and green way such as never let out untreated sewage and municipal solid waste, monitor noise pollution, moistening asbestos products to prevent dust pollution. In 2015, the President of People's Republic of China Xi Jinping visited the company due to its outstanding performance in the area of green ship recycling.

Although green ship-breaking cause cost pressure, we still choose this way to deal with our hulk, so that we can properly protect the marine environment and living conditions of our surroundings. Good marine environment is the foundation of shipping industry and we will stick on green ship recycling in the future and try to be the role model of other shipping companies and make contribution to the sustainable development of the shipping business.

拆船厂作业场景



We delivered the Chuanhe Ship to the third party to green ship recycling in 2017.



# Disposing Waste Oil in a Green Way

Shipping activities to some extent will cause marine pollution. The main sources include tank-cleaning water, ballast water, oily water, sewage, garbage and other poisons. Besides, oil, toxic liquid and exhaust gas discharged from the oil incidents give rise to marine pollution as well.

In 2017, 1,926.6m³ garbage from our owned vessels were handled, which decreased by 2.40% compared to last year of 1,974.17m³. 7,676.9t oily water from our owned vessels was dealt with which was decreased slightly compared to last year of 7,657.3t. 65,065.8t oily water from leasing vessels was disposed in 2017 and increased by 16% compared to 55,922.5t of 2016.

In order to prevent marine incidents and pollution, and to protect the marine ecosystem, we established *Ship's Garbage Management Plan* with respect to *MARPOL 73/78 and Resolution MEPC.219 (63)*, *MEPC.220 (63)* and relative conventions. The plan defines the responsibility of everyone on board and requires that all crew members should attend training conducted by management about the collection, disposition and storage of garbage. All garbage should be stored, incinerated and disposed after being classified and processed. There should be bilingual (Chinese and English) placards displayed on every garbage collecting point, giving suggestions on how to dispose the garbage. Garbage that cannot be disposed on board should be handed over to the professional reception facility from the ports and crew members should make records of that.

The oily water is unavoidable during the process of launching and sailing. If there is oily water leakage or discharging oily water before proper handling, oil slick will be appeared. The oil slick will block the sunshine to some extent and pose a threat on the photosynthesis of plankton. Then the level of oxygen will be decreased and the living conditions for marine animals would be impacted over a period of time.

We have established *COSCO SHIPPING Lines Waste Oil Residues Disposal Instruction* to manage the risk, which presents the whole process of dealing with waste oil residues. The Marine Operating Center is responsible for managing the sludge disposal of all vessels. It is required that management personnel make arrangements two weeks before reaching the port where the sludge will be removed according to the monitoring data. MOC should designate persons to monitor the work of disposing waste oil residues. When disposing waste oil residues, our supplier adopts a two-stage degreasing method. First stage is to separate oil by making use of gravity, and the second stage is breaking-coagulation, which relieves the stress of disposing waste oil residues.

We also created *Shipboard Oil Pollution Emergency Response Plan* to provide guidance for crews with respect to the steps to be taken when a pollution incident occurred or is likely to occur, and also to minimize the side effects brought by the oil leakage incidents. Whenever an oil spill occurs on board, ship's crew on duty should report to the Captain or responsible officer as soon as possible. The Captain or responsible officer should send out alarming signal immediately, and organize all crews to take actions. The responsibility of crews when oil spilling emergency happen were presented in the *"Emergency list for shipboard spillage"* established by us.

We have been emphasizing the importance of proper disposal of garbage and waste oily water and give guidance to our crews in their daily work. . In 2017, we did not have any oil spillage emergency. We will working hard on enhancing the awareness of protecting marine environment, on reinforcing the management of disposing garbage and waste oily water. In this way we can minimize marine pollution caused by shipping activities and make contribution on the sustainable development of shipping industry.



## Emergency list for shipboard oil spoilage

Rank	Locations in Charge of	Duties
Captain	Bridge/site of oil spillage	General commander, responsible for contacting outside
Chief officer	Site of oil spillage	Assist chief engineer to be the commander at site of oil removal
Second officer	Bridge/site of oil spillage	On duty and take emergency measures ,responsible for making spot record, responsible for communication with outside
Third officer	Site of oil spillage	Provide and distribute pollution prevention supplies. Direct the removing boat ,lower it, clean and remove spilled oil
Boat swain	Site of oil spillage	Provide and distribute pollution prevention supplies to crews and assist the lowering of boat, clean and remove spilled oil
Carpenter	Site of oil spillage	Check scuppers and shut down all passages concerned, clear and remove spilled oil
Sailors	Site of oil spillage	Sailors of the boat assist to lowering the boat and get down with it, clean and remove spilled oil
Chief engineer	Site of oil spillage	Commander at site of oil spillage, organize all crews to remove spilled oil
Second engineer	Engine room/site of oil spillage	In charge of the equipment in the engine room, clean and remove spilled oil
Third engineer	Site of oil spillage	In charge of the valves prevent soiled oil from spreading, clean and remove spilled oil
Electrical Technician	Site of oil spillage	Assist to lower the boat, get down with it, operate the motor clean and remove spilled oil
Electrical engineer	Site of oil spillage	In charge of electrical panel, clean and remove spilled oil
Chief motor man	Site of oil spillage	Provide and distribute pollution prevention supplies. Director of the removing boat ,lower it, clean and remove spelled oil
Motor men	Site of oil spillage	Sailors of the boat, assist lowering of boat and get down with it, clean and remove spilled oil
Stewards	Accommodations/site of oil spillage	Watch fire for accommodations and shut down the passage ways concerned, clean and remove spilled oil
Chief cook	Galley/site of oil spillage	Watch fire in galley, shut down the galley ways concerned. Clean and remove spilled oil.
Other crews	Site of oil spillage	(Distribute emergency pollution prevention supplies)clean and remove spilled oil



# Report Verification and Index Table

## 1. Index Table

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G4-4	1.1Our business
G4-5	The sealing of the report
G4-6	1.1 Our business
G4-7	1.1 Our business
G4-8	1.1 Our business
G4-9	1.1 Our business
G4-10	4.3.Maintaining Equality and Diversity
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G4-39	1.2. Establishing a modern enterprise organization structure
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G4-56	1.3.Building a sustainable development system
G4-58	5.1. Carrying Out Anti-corruption Work and Implementing Anti-corruption

Various indicators	Corresponding chapter of the report	Report Boundary
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<b>Economic performance</b>		
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<b>G4-EN3</b>	7.2Statistical Table	Internal
<b>G4-EN5</b>	7.2Statistical Table	Internal
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<b>G4-EN8</b>	6.2.Managing Ballast System	Internal
<b>Biodiversity</b>		
<b>G4-EN12</b>	6.2.Managing Ballast System	Internal
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<b>G4-EN16</b>	7.2Statistical Table	Internal
<b>G4-EN18</b>	7.2Statistical Table	Internal
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<b>G4-EN22</b>	7.2Statistical Table	Internal
<b>G4-EN23</b>	7.2Statistical Table	Internal
<b>G4-EN24</b>	6.4. Disposing Waste Oil in a Green Way	Internal
<b>Products and Services</b>		
<b>G4-EN27</b>		External
<b>Category: Society</b>		
<b>Labor Practice and Respect for Labor</b>		
<b>Labor relationship</b>		
<b>G4-LA1</b>	7.2Statistical Table	Internal
<b>Occupational health and safety</b>		
<b>G4-LA6</b>	4.1.Ensuring Employees' Safety and Training	Internal
<b>Training and education</b>		
<b>G4-LA9</b>	4.1.Ensuring Employees' Safety and Training	Internal
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<b>G4-PR1</b>	3.1.Implementing Strict Inspections on Safety Production	Internal and External
<b>Product and Service Marking</b>		
<b>G4-PR5</b>	2.3. Providing High Quality and Efficient After-sale Service	Internal and External



# Report Verification and Index Table

.2. Statistical Table

1) Energy consumption, waste and emission

Indicators	Unit	COSCO SHIPPING Lines
Electricity	Electricity (kilowatt-hour)	5,684,010
	Unit production value of 10,000 yuan (kWh/million)	0.66
Water	Sea water desalination on ship(t)	71,174.60
	Ship Domestic water (t)	204,988.70
	Office Tap water(t)	55,380.00
	Total water consumption(t)	331,543.30
	Million yuan of output per unit of water (tons/ten thousand yuan)	0.04
Gas	Natural gas (m3)	422,758
	Unit production of natural gas in million yuan (m3/ten thousand yuan)	0.05
Fuel	Fuel oil (mazout)(t)	4,609,030
	Diesel (light oil) (t)	182,050
	Total fuel consumption (t)	4,791,080
	Unite fuel oil consumption (kilogram/ Thousand ton per nautical miles)	4.80
Grease	Grease (t)	8,506.24
	Unit grease consumption(kilogram/ Thousand ton per nautical miles)	0.02
Gasoline	Gasoline (L)	2,075
	Million Units of Gasoline Consumption (tons/million)	0.02
Energy consumption	Direct energy consumption(Megajoules)	193,234,560.59
	Indirect energy consumption(Megajoules)	20,462.44
	Total energy consumption(Megajoules)	193,255,023.03
	Million yuan of production value per unit of energy consumption (terajoules/ten thousand yuan)	22.28
Greenhouse gas emission	Direct Greenhouse gas emission(t)	14,900,258.80
	Indirect Greenhouse gas emission(t)	4.00
	Unite emissions (t/box)	0.72
Exhaust emission	Oxynitride (t)	431,179.20
	Average unit turnover (t/box)	0.02
	Oxysulfide (t)	287,464.80
	Average unit turnover (t/box)	0.01
Effluent	Oily water	72,742.70
	Per unit of quantity of wastewater effluent	3.01
	Domestic wastewater	49,842
	Per unit of quantity of domestic wastewater	2.06
Waste	Hazardous wastes(kilogram)	1,926.60
	Per unit of hazardous wastes(kilogram per capita)	40
	Non-hazardous waste(kilogram)	92,400
	Per unit of non-hazardous wastes(kilogram per capita)	3.82
Dangerous goods	Operation quantity of dangerous goods(TEU)	136,739

2) Employee and training

Indicators	Unit	Amount
Total	Total employee (person)	24,190
By gender	Formal male employee(person)	11,523
	Formal female employee(person)	6,495
By age	Formal employee age≤30	3,551
	Formal employee: 30~50(person)	12,100
	Formal employee: ≥50(person)	2,367
By employment category	Formal employee (person)	18,018
	Informal contracted employee (person)	6,172
By area	Mainland formal male employee (person)	9,434
	Mainland formal female employee (person)	4,147
	Total mainland employee (person)	13,581
	Foreign formal male employee (person)	2,089
	Foreign formal female employee (person)	2,348
	Total foreign formal employee (person)	4,437
By level	Formal male employees of Management level	9
	Formal female employees of Management level	3
	Total formal employees of Management level	12
	Other formal employees	18,006
Turnover	Turnover amount(person) of formal employees	711
	Turnover rate of formal employees (only domestic data)	3.95%
Occupational injury	Deaths amount of occupational injury (person)	0
	The number of occupational injury (person)	2
	The total number of days lost (day)	90
	Injury rate by thousand person	0.08
Training	Trained formal employees (person)	18,018
	Total hours of training (hour)	375,334
	Average employee training hours (hour)	20.83
	Training rate of formal employees	100.00%
	Male trained formal employees(person)	11,523
	Male formal employees training rate	100.00%
	Female trained formal employees(person)	6,495
	Female formal employees training rate	100.00%
	Trained formal employees of Management level(person)	12
	Formal employees of Management level training rate	100.00%
	Trained other formal employees (person)	18,008
	Other formal employees training rate	100.00%

Remarks: Water, electricity, and gas data are gathered from the headquarters of COSCO SHIPPING Lines. Fuel consumption, greenhouse gas, and exhaust gas data are gathered from ships that use COSCO SHIPPING Lines' procurement of fuel oil. Wastewater and waste data are gathered from the headquarters of COSCO SHIPPING Lines and ships that use COSCO SHIPPING Lines' procurement of fuel oil.



# Report Verification and Index Table

### 3. The scope of the subsidiaries this report covers

The scope of the subsidiaries covered in this report is as follows, a total of 50, and the scope of the specific topics will change, as indicated in the corresponding Chapters of our report.

1	SHANGHAI PANASIA SHIPPING Co., Ltd	26	CHINA SHIPPING CONTAINER LINES (DALIAN) Co., Ltd (terminated on June 6 <sup>th</sup> , 2017)
2	SHANGHAI COSCO INFORMATION & TECHNOLOGY Co., Ltd	27	CHINA SHIPPING CONTAINER LINES (TIANJIN) Co., Ltd (terminated on June 5 <sup>th</sup> , 2017)
3	SHANGHAI COSCON DOCUMENT SERVICES Co., Ltd	28	CHINA SHIPPING CONTAINER LINES (QINGDAO) Co., Ltd
4	COSCO SHIPPING International Freight Co., Ltd	29	CHINA SHIPPING CONTAINER LINES Co., Ltd
5	COSCO SHIPPING Lines Agency Co., Ltd	30	CHINA SHIPPING CONTAINER LINES (XIAMEN) Co., Ltd (terminated on December 19 <sup>th</sup> , 2017)
6	SHANGHAI OCEAN SHIPPING Co., Ltd	31	China Shipping Container Lines Guangzhou Co., Ltd
7	Tianjin Binhai COSCO SHIPPING Lines Logistics Co., Ltd	32	China Shipping Container Lines Hainan Co., Ltd
8	Shanghai COSCO SHIPPING Lines Logistics Co., Ltd	33	Zhonghai Container Transport (Dalian) Information Processing Co., Ltd (terminated on April 27 <sup>th</sup> , 2017)
9	Tangshan COSCO SHIPPING Lines Logistics Co., Ltd	34	YANGPU COSCO SHIPPING REFRIGERATION STORAGE & TRANSPORTATION Co., Ltd
10	Shanghai Tianhongli Asset Management Ltd	35	COSCO SHIPPING Lines (North America) Inc.
11	COSCO Finance Co., Ltd	36	COSCO SHIPPING Lines (Central America) Incorporation
12	COSCO SHIPPING Lines (Dalian) Co., Ltd	37	COSCO SHIPPING LINES (Panama) INCORPORATION.
13	COSCO SHIPPING Lines (Xiamen) Co., Ltd	38	COSCO SHIPPING Lines (Brasil) S.A.
14	COSCO SHIPPING Lines (Tianjin) Co., Ltd	39	COSCO SHIPPING Lines ( Europe ) GmbH
15	COSCO SHIPPING Lines (Shanghai) Co., Ltd	40	COSCO SHIPPING Container Line Agencies Limited
16	COSCO SHIPPING Lines (Qingdao) Co., Ltd	41	GOLDEN SEA SHIPPING PTE. LTD.
17	COSCO SHIPPING Lines ( Wuhan) Co., Ltd	42	New Golden Sea Shipping Pte Ltd
18	COSCO SHIPPING Lines (Hainan) Co., Ltd	43	COSCO SHIPPING Lines (Korea) Co., Ltd
19	COSCO SHIPPING Lines (Ningbo) Co., Ltd	44	Coheung Maring Shipping Co., Ltd
20	COSCO SHIPPING Lines South-China Co., Ltd	44	COSCO SHIPPING Lines (Japan) Co., Ltd
21	Wuhan Cosco Logistics Co., Ltd	45	COSCO SHIPPING Lines (South Africa) Pty. Ltd.
22	COSCO SHIPPING Lines Agency (Qingdao) Co., Ltd (terminated on May 23 <sup>rd</sup> , 2017)	46	COSCO SHIPPING Lines West Asia FZE
23	COSCO SHIPPING Lines Agency (Shanghai) Co., Ltd	47	COSCO SHIPPING LINES (OCEANIA) PTY LTD
24	COSCO SHIPPING Lines Agency (Xiamen) Co., Ltd	48	COSCO CONTAINER LINES (HONGKONG) CO.,LIMITED
25	COSCO SHIPPING Lines Agency (Ningbo) Co., Ltd (terminated on November 2 <sup>nd</sup> , 2017)	50	COSCO (Cayman) Mercury Co., Ltd



# Report Verification and Index Table

## 4. Report Verification

### Independent assurance statement

#### Scope and approach

DNV GL Business Assurance Group ('DNV GL') has been commissioned by COSCO SHIPPING Lines Co., Ltd. ('COSCO SHIPPING Lines') to carry out an independent verification of the COSCO SHIPPING Lines 2017 Sustainability Report ('the Report').

The verification was performed against the DNV GL Protocol for Verification of Sustainability Reporting (VeriSustain®), which is based on our professional experience, international assurance best practice including International Standard on Assurance Engagements 3000 (ISAE 3000) and the Global Reporting Initiative (GRI) Sustainability Reporting Guidelines.

In addition to verify the contents disclosed in the Report, we evaluated the specified performance data using the reliability principle together with COSCO SHIPPING Lines data protocols for data measurement, recording and processing.

Performance and data disclosed in the Report is in accordance with GRI 4.0 Core Option

We understand that the reported financial data and information are based on data from COSCO SHIPPING Lines' 2017 Financial Annual Report, which had been audited by third party. The review of financial data taken from the Annual Report is not within the scope of our work.

We planned and performed our work to obtain the evidence which is necessary to provide a basis for our assurance opinion. Our assurance engagement was performed against VeriSustain® with 'Principle Adherence' type, we are providing a 'moderate level' of assurance. A 'high level' of assurance would have required additional work at Group and site level to gain further evidence to support the basis of our assurance opinion.

#### Responsibilities

COSCO SHIPPING Lines is responsible for the collection, analysis, aggregation and disclosure of information contained in the Report. Our responsibility in performing this work is to the management of COSCO SHIPPING Lines only and in accordance with terms of reference agreed. The stakeholders of COSCO SHIPPING Lines are the intended users of this statement.

DNV GL was not involved in the preparation of any information or data included in the Report except for this Assurance Statement. DNV GL maintains complete impartiality toward any people interviewed and the verification by numerous public means to understand positive and negative comments on COSCO SHIPPING Lines. DNV GL expressly disclaims any liability or co-responsibility for any decision a person or entity would make based on this Assurance Statement.

#### Basis of our opinion

A multi-disciplinary team of sustainability and assurance specialists performed work at COSCO SHIPPING Lines headquarter. We undertook the following activities:

- Review of the current sustainability issues that could affect COSCO SHIPPING Lines and are of interest to stakeholders;
- Review of COSCO SHIPPING Lines' approach to stakeholder engagement and recent outputs;
- Review of information provided to us by COSCO SHIPPING Lines on its reporting and management processes relating to the Principles;
- Interviews with top management and senior managers responsible for management of sustainability issues and review of evidence to support issues discussed;
- Based on significant sustainability issues disclosed in the Report, visits to COSCO SHIPPING Lines's headquarter and 1 operation sites (Shanghai Ocean Transportation Co., Ltd.) to review process and systems for preparing sustainability data and implementation of sustainability strategy;
- Review of supporting evidence for key claims and data in the report. Our checking processes were prioritized according to materiality and we based our prioritization on the materiality of issues at a consolidated corporate level;

If there is any inconsistency between the Chinese and English versions, the Chinese version will prevail.

- Performed sample-based checks of the processes for generating, gathering and managing the quantitative

and qualitative data presented in the Report;

- An independent assessment of claim's reporting against the GRI 4.0 core option.

#### Opinion

On the basis of the work undertaken, nothing came to our attention to suggest that the Report does not properly describe COSCO SHIPPING Lines' adherence to the Principles. In terms of reliability of the performance data, nothing came to our attention to suggest that these data have not been properly collated from information reported at operational level, nor that the assumptions used were

inappropriate.

In our opinion, based on the scope of this assurance engagement, nothing came to our attention to suggest that the Report does not meet the content requirements of the GRI 4.0 core option, i.e.,

- General Disclosures: We reviewed the general disclosures reported in this Report and nothing came to our attention to suggest that the reported information generally does not meet the reporting requirement of GRI 4.0 core option and the reason for non-disclosure is explained.
- Key Performance Indicators: We reviewed the key performance indicators reported in this Report and nothing came to our attention to suggest that the reported information generally does not meet the disclosure requirement.

#### Observation

The following is an excerpt from the observations and opportunities reported back to the management of COSCO SHIPPING Lines. However, these do not affect our opinion on the Report, and they are indeed generally consistent with the management objectives already in place.

- It is suggested to clearly disclose boundaries for each material aspects in the Report
- It is suggested to clearly disclose the processes and mechanism of stakeholder engagement in the Report
- It is suggested to clearly disclose the comparability for the data and performance described in the Report

#### Opinion for report content and quality of principles:

**Materiality:** COSCO SHIPPING Lines has established a materiality issues determination process within the company. The Report disclosed the materiality issues which identified through the determination processes and the relevant sustainability context. The Report also revealed the management approach and performance achievement through the transparent display of important sustainability information.

**Stakeholder inclusiveness:** COSCO SHIPPING Lines has established a mechanism for stakeholders' communication and engagement through multiple actions. Stakeholder expectation has been integrated into operation process, the results of this communication and engagement already influenced the setup of the sustainability strategy of COSCO SHIPPING Lines to a certain degree. The stakeholders' engagement and their focus has been revealed in the Report.

**Responsiveness:** COSCO SHIPPING Lines has setup a response mechanism to improve the responsiveness to stakeholders through establishing sustainability policies, objectives and target as well as improving governance structure, management systems and processes. the Report respond to the main stakeholder concerns about COSCO SHIPPING Lines's economic, social and environmental indicators and performance, especially of the multiple materiality issues as disclosed in the Report. The indicators and sustainability performance as disclosed in the Report was based on the identification and analysis in materiality issues that related with COSCO SHIPPING Lines' sustainability strategy.


**Completeness:** Within the reporting scope and boundary defined by COSCO SHIPPING Lines, we believe that the Report does not omit relevant information that could significantly influence stakeholders' decisions or reflects significant sustainability impacts during the reporting period.

**Accuracy and Reliability:** COSCO SHIPPING Lines has established a comprehensive sustainability performance information management processes, performance information and data about the key responsibility issues is accurately reflected in the Report. Per the requirements of moderate level of assurance, we believe the data/information presented in the Report are accurate and detailed for stakeholders to understand the organization's performance on material topics.

**Neutrality:** We consider the overall tone of the Report to be neutral and the presentation of information to be generally balanced. The emphasis on various topics in the Report is basically proportionate to their relative materiality.

**Sustainability context:** In the review of the audit team, we believe that the Report presents the performance in its own sustainability and general business context, through discussing the performance of the COSCO SHIPPING Lines in the context of the limits and demands placed on environmental, social resources at the sector and regional level.

For DNV GL - Business Assurance Group

 Cai, Kun Quan	 Lin, Chun Nan Reviewer	 David Hsieh Approval
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## COSCO SHIPPING Lines Co., Ltd.

### -2017 Sustainability Development Report