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Sustainable Development Report 2018  
Sahaviriya Steel Industries Public Company Limited

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Vision

# Leading Innovative and Reliable Steel Company

Mission

Innovate premium value steel product,  
service and market for customers; create sustainable  
shared value and trust for stakeholders

Values

**Fighting spirit**

Never give up

**can change**

Be the leader of change

**service-mind**

Deliver more than  
expected

# iFacts

**integrity**

We do what we say

**aim for excellence**

Anything is possible

**teamwork**

One for all, all for one





## Message from the Group CEO and President

### 3 main strategies:

- 1) Driving the existing businesses by formulating strategies which are consistent with the Group's future direction, fostering innovation and sustainable growth,
- 2) Creating new businesses in areas that the Group has keen expertise (Home Ground), and
- 3) Streamlining the Group's supporting units to strengthen the Group's business bases. It is also specified that sustainable development will be one of the core strategies to build up solid foundation and business growth.



Mr. Win Viriyaprapaikit  
Group CEO and President



### Dear All Stakeholders,

In 2018, Sahaviriya Steel Industries Public Co., Ltd. or SSI has reviewed its long-term strategic plans, consisting of 3 main strategies: 1) Driving the existing businesses by formulating strategies which are consistent with the Group's future direction, fostering innovation and sustainable growth, 2) Creating new businesses in areas that the Group has keen expertise (Home Ground), and 3) Streamlining the Group's supporting units to strengthen the Group's business bases. It is also specified that sustainable development will be one of the core strategies to build up solid foundation and business growth.

Following such strategic plans does not only make the Company be able to respond to the Company's vision of "Leading innovative and reliable steel company" and the mission of "Innovate premium value steel product, service and market for customers; create sustainable shared value and trust for stakeholders", but it also makes the Company be able to fulfill the stakeholders, near and far, with regards to social, economic and environmental dimensions including to achieve the Company's sustainable development objectives and in line with the United Nations' Sustainable Development Goals – SDGs.

### Significant Sustainability Performance in 2018

#### Economic

In 2018, total revenue from sales and services of the Company and its subsidiaries recorded at Baht 31,428 million, an increased by 24% from the previous year, due to the increase pricing of hot rolled steel business consistent with the world market. Total sales volume of steel was 1.441 million tons, an increase of 12%, despite the EBITDA decreasing by Baht 1,665 million, or 73% (excluding unrealised foreign exchange gain on the debt from the loan guarantee under the Business Rehabilitation Plan of Baht 162 million, the operating EBITDA would have been Baht 1,503 million, or decreasing by 55% from Baht 3,347 million in 2017). Net profit totaled Baht 194 million, a decrease from Baht 4,535 million, or 96% from the previous year due to the increased cost of sales and SG&A (Selling, General & Administrative Expense), a reduced gap between selling prices and the costs associated with the importing of main raw materials pursuant to the domestic and worldwide prices of hot rolled steel markets.

1. We supplied Premium Value Products (PVPs) to customers totaling 732,460 tons, accounting for 51% of total sales, an increase of 11% compared with the previous year.
2. We generated benefits to 471 businesses, community enterprises and career groups in Bangsaphan District, by purchasing products and services worth Baht 252 million and have developed 2 new community enterprises to be our trade partners.
3. SSI Group employed totaled 2,645 employees where 2,326 employees worked at Bangsaphan Plant (1,613 employees or 69% have domicile in Prachuap Khiri Khan Province) and also hired 483 outsourcing employees.



Our sustainable development will not limit to at operation with responsibility, but it will include seeking for opportunities to build up value or positive impacts that both business and societies will gain from the growth of business that they become the economic system that responds to the sustainable development goals.



## Social

The Company undertook various social projects which focused on building strength to the underprivileged and community projects which focused on development of 4 main aspects, i.e. education quality, environmental quality, career enhancement and income & good quality of life, including supported the religious and local traditional activities. There were 44 projects operated with 17,874 stakeholders gaining benefits from these activities.

### 1. Social projects

- **Social capital development**

The Company joined hand with The Foundation for Life Development under the Patronage of H.R.H. Princess Galyani Vadhana Krom Luang Naradhiwas Rajanagarindra (FLDP) to arrange the 7<sup>th</sup> Sahaviriya Bangkok Triathlon 2018. Funds raised from the event were used to support the public interests relevant to improvement of quality of life for the people, such as to support works of FLDP, the foundation for helping children and youth under custody of Department of Juvenile Observation and Protection and Tulakarn Chalermprakiat Hospital, Court of Justice.

Thailand Kon Lhek Mini Marathon 2018, a collaborative SD project with Thai steel partners, could raise fund of Baht 2.6 million to support organisations for the underprivileged. Total funds raised by this event during the 11 year period have been more than Baht 26.6 million.

### 2. Community development projects

- **Household economics and career promotion**

Performance of 18 community bank projects established by the communities with the supports from the Company supported was satisfactorily and they became important foundation of the community economics. As of 31 December 2018, total funds amounting to Baht 33 million and 3,625 project members could enjoy the benefits. In addition, 9 community leader councils have been established to actively manage their communities on participatory basis.

- **Education and youth**

Technician Development for Steel Industries Project, a collaborative project between Sahaviriya Group and Bangsaphan Industrial and Community Education College could help the local youth to have qualified education institutes and curriculum as well as could allow the Company to have more access to skilled workers. At present, there were 639 students across 11 classes graduated from this project. Out of these numbers, there are 176 persons working with Sahaviriya Group.

In 2018, there were 7 local schools participated in the Sahaviriya Funds for Bangsaphan Educational Development Project and operations of all participating schools have achieved the objectives of the plans. In addition, 6 schools which graduated from this project passed the project's evaluation criteria and had academic achievement as per the specified target.

- **Environmental quality development**

SSI has collaborated with relevant agencies to undertake various environmental quality awareness promotions and campaigns on continued basis – e.g. SSI Beach Clean-up Activity, Two-wheels Preserve Bangsaphan Project, SSI Waste Recycling Bank for Schools Project, and Youth Conservation Camp. There are 2,726 people participating in these activities.

- **Volunteering cultural development**

In 2018, SSI staff in collaboration with the community people arranged 20 SSI Volunteer Activities. There were totally 830 SSI staff participating in, or accounting for 6,640 volunteering service hours and there were 952 local people in the communities participating in volunteering community development activities, or accounting for 7,616 volunteer service hours.

## Environment, Safety and Occupational Health

Our environmental performance during the past year has better safety management and exceeded standards required by the laws. Our record on Lost Time Injury Frequency Rates (LTIFR) or the number of lost time injuries occurring in workplace per million hours worked in 2018 was 0.31, decreasing from 0.66 in 2017. Nonetheless, we still determine to implement various measures to lower LTIFR to be closest to zero or equal to zero and without employee exposing to occupational diseases, which include volunteering project on creation of disciplines, safety culture & environment, training on occupational safety, health and environment, so that the employees at all levels can learn about operating risk sources with preventive measures and risk control.

## Sustainability Awards

SSI received many awards, such as Thailand Energy Awards 2018 for Outstanding Designated Factory in Energy Conservation; "EIA Monitoring Awards 2018" in recognition of the outstanding Industry and Certificate of Thailand Voluntary Emission Trading Scheme (Thailand V-ETS) in Category of Steel Industry.

Beginning from 2019, our sustainable development will not limit to at operation with responsibility, but it will include seeking for opportunities to build up value or positive impacts that both business and societies will gain from the growth of business that they become the economic system that responds to the sustainable development goals.





## SSI and SDGs



Sahaviriya Steel Industries Public Company Limited determines to develop business by means of value added creation and enhancement of value throughout business chains for the growth of overall economic system, generation of investment, expansion of employment and tax payment for development of the country which can lead to better quality of life and well-being of the people on sustainable basis. In addition, our development is corresponding to Sustainable Development Goals (SDGs) of the United Nations which has been announced as global development agenda for the period of 2015 - 2030.



### Environmental Management

1. Observe ISO 14001 Environmental Management Standards
2. Promote energy conservation
3. Encourage for environmental friendly procurement
4. Climate change management
5. Preserve community environment through environmental projects



### Create Shared Value with Customers and Trade Partners

1. Encourage development of innovative products and services which can add value to customers continually.
2. Purchase products and service from local communities.
3. Develop research works to build knowledge to industries.



### Occupational Health and Safety Management

1. Promote occupational health, safety and working environment through Zero Accident Campaign and Behavior Based Safety (BBS).
2. Manage and prepare readiness for emergency response.
3. Safety management on transportation of raw materials and products.



### Equitable Treatment

1. Treat trade partners-competitors equitably by complying with laws and regulations of public sectors.
2. Support government sectors on overseeing free trade fairly.
3. Support anti-corruption policy of the Company and become member of Thailand's Private Sector Collective Action Against Corruption (CAC).



### Personnel Development and Human Rights

1. Define employment structure, compensation & welfare and skill/knowledge development continually.
2. Promote for Work Life Balance.
3. Non-discrimination on employee recruitment.
4. Oversee safety, occupational health and environmental condition of employees.



### Community and Social Development

1. Promote money savings to communities located in areas where business is situated.
2. Encourage people and youth to learn about knowledge and skills on business operation and career development to generate income.
3. Support quality of life development of communities through sustainable activities and projects.
4. Emphasise on employment of local people, support family institution and minimise migration.



## Corporate Information

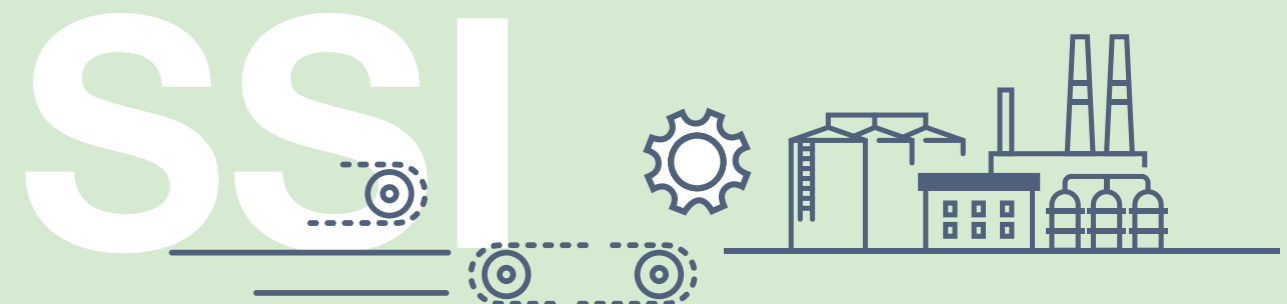
Sahaviriya Steel Industries PLC or SSI is Southeast Asia's largest producer of hot rolled steel sheet in coils (HRC), with 4 million tons annual capacity. SSI endeavors to supply premium-grade steel sheets to cater for the region's growing demand in various sectors such as automobile, energy, transportation and construction sectors. SSI has investments in joint-venture downstream plants, namely Thai Cold Rolled Steel Sheet PLC ("TCRSS") - Thailand's first and largest cold roll mill, and Thai Coated Steel Sheet Co., Ltd.,

("TCS") - Southeast Asia's first and largest electro-galvanizing line. All SSI's plants in Thailand are located on a world-class coastal industrial site in Bangsaphan, Prachuap Khiri Khan Province, 400 km south of Bangkok on the western peninsula of Thailand, a site efficiently integrated with a privately-owned deep-sea port (Prachuap Port Co., Ltd., or PPC), which allows import of raw materials and export of finished products on a large scale. SSI extends its engineering capabilities into its fully-owned subsidiary, West Coast Engineering Co., Ltd.,

or WCE, which specialises in engineering, maintenance, spare parts production, fabrication, erection and commissioning service.

Our people's passion and energy is captured in the Company's vision statement - "Leading Innovative and Reliable Steel Company", and mission "Innovate premium value steel product, service and market for customers, create sustainable shared value and trust for stakeholders".

For more information, please visit  
<http://www.ssi-steel.com>





## SSI Group Structure



### Hot Rolled Coil Business

Sahaviriya Steel Industries Public Company Limited

- Manufacturer of hot-rolled coils
- Manufacturer of hot-rolled coils pickled and oiled

Core business



### Downstream Business

Thai Cold Rolled Steel Sheet Public Company Limited

- Manufacturer of cold-rolled steel sheet

Increase revenues and enhance sustainable growth



### Downstream Business

Thai Coated Steel Sheet Company Limited

- Manufacturer of electro-galvanised steel sheet

Increase revenues and enhance sustainable growth



### Port Business

Prachuap Port Company Limited

- Provider of deep-sea port

Reduce costs and increase revenues



### Engineering Business

West Coast Engineering Company Limited

- Provider of engineering and maintenance services

Reduce costs and increase revenues





# SSI Corporate Social Responsibility Management

## Corporate Social Responsibility Concepts and Policies

Sahaviriya Steel Industries Public Company Limited, or SSI, implemented Corporate Social Responsibility policies based on its business philosophy and business ethics that have been molded in the way of a pushing forward, driving as well as sustainable development and growth.

## Business Philosophies

### 1. Devotion to Excellence

SSI is determined to do all we can to continuously improve ourselves and our operations. Through study, research, development, and upgrading, we aim for the highest we can attain. This effort to develop and break new records of excellence must be perpetual in all aspects of our operations.

### 2. Adherence to Quality of Products and Services

SSI's products and services are all designed with the best interests and satisfaction of the customer in mind. We believe that our customers will always be willing to pay for the best, and that no improvement is of any use if it does not meet our customers' needs.

### 3. Belief in the Value of Our Personnel

SSI realise that good employees are the main reason for an organisation's success. For this reason, we take care to hire only the best to work with us, and provide fair and attractive remuneration packages that include constant training and education. Quality of life for our employees is paramount; their occupational health and safety are assured.

### 4. Commitment to Honesty and Ethics

SSI is fully resolved to conduct our business honestly and ethically. We believe that honesty and ethics in business bring good order to society and progress to the nation, and assure long-term prosperity in commercial dealings, for that reason we ethically conduct our business with all stakeholders, including shareholders, investors, customers, business partners, creditors, competitors, employees, the local community, and society in general.

### 5. Dedication to Our Social and Environmental Responsibilities

SSI firmly believes that we are part of society. Any change in society is certain to affect our business. We are convinced that business and society must all be developed in concert to ensure a sustainably successful enterprise. Our responsibility, therefore, is to take part in continual maintaining, developing and conserving of a good natural and social environment.

## Business Ethics of the Company

In conducting the business, the Company adheres to the principles of accountability, transparency, integrity, and business competitiveness by acting in the best interest to all stakeholders in an equitable manner.

### 1. Shareholders

The Company realises the shareholders are the owners of the Company and the Company has the duty to generate value-added to the shareholders in a long term. The Company has, therefore, stipulated a guideline for the directors, executive, and employees to perform the followings:

- 1) Perform duties to the fullest capacity with integrity, care, prudence and fair treatment for the best interest of all shareholders.
- 2) Present the operating performance report, financial status report and other reports with accuracy and completeness and in a timely manner.
- 3) Report a trend of the Company, both on the positive and negative sides, to all shareholders in an equitable manner based upon sufficient factual basis, quantitative information and rationale.
- 4) Ensure that there is no exploitation of undisclosed information or any wrongful action for improper advantage for oneself, or others, which may cause conflict of interest for the Company.

### 2. Customers

The Company values the vital role and satisfaction of customers which contribute to success of the Company's businesses. Therefore, the Company has a strong intention to pursue the methods that are reliable to customers and can fulfill the needs of customers in a more efficient and effective manner. The guidelines are as follows:

- 1) Deliver quality products and services that meet or exceed the expectation of customers
- 2) Communicate with customers with courtesy and ensure that complete, accurate and up to date information of products and services is given to the customers. The Company will not misrepresent the products and services in terms of quality, quantity or any other conditions.
- 3) Strictly follow the conditions applied to the customers. In case the conditions cannot be satisfied, the Company will inform the customers without delay to figure out a possible solution together.
- 4) Establish a system and channel that allows customers to make complaints about quality, quantity and safety of products and service, and respond to the complaints in a timely manner.
- 5) Strictly protect confidential information of customers and will not use the information for other interests in an improper respect.
- 6) Provide instructions on the use of products and services in an efficient manner to maximise benefits

### 3. Suppliers

The Company realises that ethical conduct with suppliers should be based on fair benefits to both parties. Thus, the Company commits to provide facts and accurate reports, implements according to agreements, negotiates and seeks solutions based on business relationship as well as avoids the situation which will result in a conflict of interest. The guidelines are as follows:

- 1) Never request, receive or pay any fraudulent benefits from and to suppliers.
- 2) With an evidence indicating a fraudulent benefit has been claimed, received or paid, disclose such relevant information to the suppliers and together figure out the solution in a timely manner.
- 3) Strictly perform in accordance with the conditions under the agreements and inform the suppliers in advance in case of inability to meet any condition.

### 4. Competitors

The Company realises the commitment to treat its competitors fairly. The guidelines are as follows:

- 1) Never seek any confidential information of the competitors by unfaithful or improper means.
- 2) Never destroy the competitors' reputation by offensive accusations.

## 5. Employees

The Company realises that employees are valuable resources for the success of the Company; thus the employees are treated fairly in terms of compensation, opportunity and development, and potential based on humanity practices regardless of their race, religion, gender or physical condition. The guidelines are as follows:

- 1) Treat employees with respect to individual value and dignity
- 2) Provide fair compensation to employees
- 3) Provide a safe working environment to employees considering their lives and properties at all times
- 4) Appoint, rotate, promote and demote employees with sincerity and based on knowledge, merit and suitability
- 5) Value development of knowledge and ability of all employees
- 6) Avoid any unfair action which may affect the job security of the employees or any action which may threaten or cause pressure to mental health of employees

## 6. Supervisory Authorities

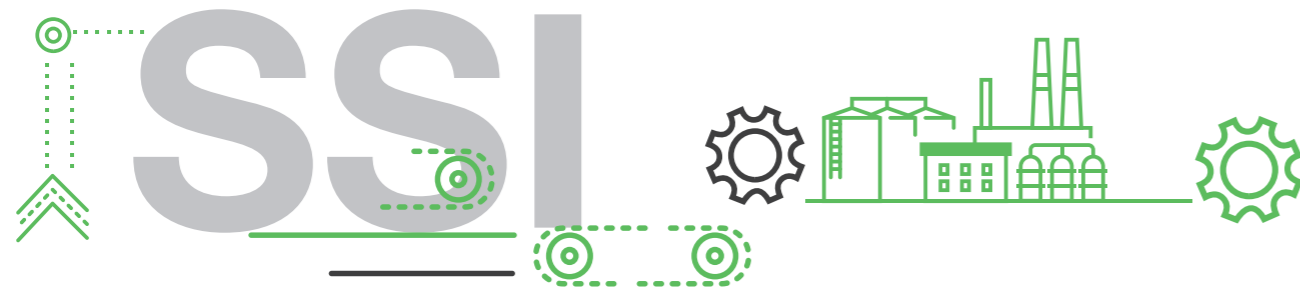
The Company values its duty to comply with law and business practices. The Company strictly conducts the business under laws, articles, regulations and standards imposed by supervisory authorities as well as cooperate with supervisory authorities in relevant matters.

## 7. Society and Community

The Company recognises accountabilities towards society and community as the core of business, with full realisation of the possible effect on natural resources and the environment. It has constantly provided support to a number of activities to improve society and community, safeguard and rejuvenate natural resources as well as to enhance the community capacities in an effort to bring about sustainable development.

The Company establishes a concept for SD operation and communication guidance as follows:

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## SD Management System

The Company has established the SD Management Committee, which consists of executives from each division. Their duties and responsibilities are to implement and follow up on the SD plan ensuring it to be in line with relevant policies. In addition they allocate the resources necessary for SD operation and promote the work of the SD Management Sub-Committee, which the Committee proposed to the President for appointment. The objectives of the Sub-Committee and scope of their responsibility is to support the work of SD Committee.

The Committee reports its SD operating result to the Good Corporate Governance Committee (CG) quarterly. The duties and responsibilities of CG Committee are to provide an opinion to the management regarding SD and to monitor them in establishing a clear action plan. Furthermore they follow up on the implementation of the management plan and then submit the results to the Board of Directors.







## Economic Performance

### Economic Overview

The overall economic in year 2018 continues to grow in slower rate in several regions by domestic fundamental factors, amongst the widespread impacts of trade war between US and China. US Economy has been driven by the expansion of private consumption plus positive factors including personal tax reduction and low unemployment rate resulting in continuously economic growth. However, political problem between the two main political parties is an issue causing delays in government' policy and implementation and negotiation to end the trade war between US - China must be followed up closely. The European economy (EU) still has good fundamentals but the unpredictable result of the BREXIT, the conflict and fiscal policy in Italy, the impacts from QE reduction to boost economy and the tension in international trade are pulling the economy down.

Asean economy has expanded as a result of public fundamental investment and domestic consumption but it might be affected by the world economic slowdown. Chinese economy was sluggish concerning the trade war while the government has stimulated the economy by easing monetary and fiscal policies such as reducing reserve requirement in commercial banks to increase liquidity, personal income tax reform plan, support local investment, etc. The trade war delivered direct impacts to export sector and trading partners of the Asean economy.

For Thailand's economy, Office of the National Economic and Department Board (NESDB) announced that, in 2018, the domestic economy expanded by 4.1%, an increase from 4.0% in 2017, supported by consumption and investment from private sector, expansion of exports, the government policy in Eastern Economic Corridor (EEC) project and growth of household spending and tourism incomes, against the decreased in farm income index from the decline in agricultural products price index.

### Business's Strategy

From the slower global economic growth and risks arisen from the world trade and economic impacts, several countries have launched policies to mitigate such external factors that might affect the whole countries and/or businesses in private sectors. The Company is aware of the factors that may arise and has impact to the business operation. Therefore, it has been closely monitoring and implementing strategic plans for appropriate business management as follows:

### Marketing Strategy

The Company cautiously manages the procurement of raw material in order to get satisfied spread between selling price and raw material price with suitable quantity and establishes strategies to reduce risks in a sluggish market. In addition, it applies proper sales policy for each customer and closely monitors on both domestic and overseas markets in order to analyse and control product sales to be in line with the purchase order and delivery of slabs from foreign countries as well as simultaneously seek for new sources of imported raw materials with high quality, low cost, adequate quantity and short delivery time. Production plan has been managed in cooperation with sales projection for shorten delivery lead time. The Company also closely monitors on dumping situation of imported products in order to take proper and timely actions and emphasises on the Innovated Premium Value Products for particular applications such as construction, machine parts, etc.

### Production Strategy

The Company has improved the production process, reviewed the inventory management plan, and introduced new technologies to enhance the efficiency of quality control and the accuracy of production process leading to a significant reduction of inferior goods. The Company has also obtained an automatic system to be used in product quality management to accommodate the ability to meet the customer requirements, reduce human errors and improve product quality consistency. Moreover, the Company established a working group for production process development aiming to figure out solutions for particular problems. The working group is responsible for analysis, improvement planning and implementation of existing and new projects to increase efficiency and reduce production cost as well as improve product quality.

In addition, the Company has prepared its personnel with necessary equipment to respond to emergencies including insurances covering property damages, damages to goods and products from the emergency incidents as well as business interruption caused by natural disasters. The Company has operated in accordance to ISO 14001:2015 standard and continuously monitor changes of environmental related laws.

### Financial Strategy

#### 1. Exchange Rate Management

The Company was granted additional credit line for forward contract used for raw material purchase after it had been suspended since entering the Business Rehabilitation. Furthermore, the Company has opened a Foreign Currency Deposit (FCD) account for its foreign currency balance. Nonetheless, the Company has exchange rate risk from debt obligation under the Plan denominated in US dollar currency.

## 2. Trade Credit Management

The Company has emphasised on the quality of trade credit, efficient control of debt collection, a good internal control system, and a strict credit policy. The Company has also reviewed credit granted to customers and credit approval authority to establish the consistent trade credit standards and control the non-performing credit to the level that will not impact on the Company's performance in overall. In addition, the Company has closely monitored outstanding overdue debt by joint planning payment schedule and establishing a credit policy in repaying overdue debt (if any) before delivering new products to customers.

## 3. Liquidity Management

The Company has closely monitored its working capital through regular projection on cash inflow and cash outflow in order to be aware of future liquidity requirements and have sufficient preparation time for liquidity solving. The Company continues to manage and prioritise on sales and product innovation for premium value, conducts cost reduction in production and reduces other expenses. Moreover, monthly meetings are held regularly with the creditor committee to monitor the implementation of the Plan and cash monitoring agent monitors the Company's cash flow to ensure the Company's proper cash management.

## Economic Performance

Transactions	2017 (Million Baht)	2018 (Million Baht)	% Change (YOY)
Sales and Service Revenues	25,332	31,428	+24%
Group Sales Volume (MT)	1,285	1,441	+12%
EBITDA	6,115	1,665	-73%
Net Profit (Loss)	4,535	194	-96%



# Occupational Health, Safety and Environmental Management

Sahaviriya Steel Industries Public Company Limited (SSI) operates business by observing philosophy and business ethics by believing in value of their staffs, ensuring that they will have good quality of life with safety and healthy working conditions as well as adhering to social and environmental responsibility. The Company believes that occupational health, safety and environmental management system is very crucial for its business operations. Hence, the Company intends to undertake appropriated occupational health, safety and environmental management system on continued basis by emphasising on constant development and improvement to ensure that they conform to the relevant standards specified.

## Occupational Health and Safety Management

The Company also determines to build up awareness on occupational health, safety and working environment including social responsibility in order to protect its employees and contractors working in the SSI Bangsaphan Steelworks area from occupational diseases and injuries by complying with Occupational Health and Safety Assessment Series (OHSAS 18001) Standards. Objectives are to provide employees with better physical and mental health, without any occupational related diseases and to make them feel confidence in the occupational health, safety and working environment management system of the organisation.

## Performance on Occupational Health and Safety

The Company emphasises on operation and development of its occupational health, safety and working environment with aims to make its employees realize and put emphasis on taking care of themselves and their colleagues so they can work safely without having occupational accidents through various projects, such as Zero Accident Campaign, Behaviour Based Safety (BBS) Project, Safety Patrol and employee health surveillance from exposure of operational risks. The Occupational Health, Safety and Working Environment Committee had been established to supervise, monitor and provide guidelines to improve safety in all of the plant areas with active support from the management. As a result, the Company continues to take various measures to minimize the Lost Time Injury Frequency Rate (LTIFR) per one million hour worked to make it closest to zero or zero and without occupational related diseases on continued basis.

In 2018, LTIFR per one million working hours of SSI is 0.31, a reduction of 0.66 in the year 2017. In overall, LTIFR of the SSI Group is 0.56 which increased from last year which was at 0.46 due to the increased LTIFR of West Coast Engineering Company Limited (WCE) as it has 3 incidents of lost time injuries. In the year 2019, safety plans have been arranged to solve such problems, such as encouraging all supervisors to attend Job Safety Analysis (JSA) trainings, establishing reward and punishment measures according to the safety-driven plan as well as implementation of KPI.

### Lost Time Injury Frequency Rate (LTIFR) per Million Hours Worked of SSI Group

Company	2016	2017	2018
SSI	0.35	0.66	0.31
TCRSS	0.00	0.00	0.00
WCE	0.77	0.00	1.86
PPC	0.00	3.71	0.00
SSI Group	0.31	0.46	0.56

\* LTIFR (Lost Time Injury Frequency Rate) = (Number of lost time injuries in accounting period) / (Total hours worked in accounting period) x 1,000,000

\* Data as of 31 December 2018.

### Occupational Health, Safety and Environmental Trainings

Occupational health, safety and working environment trainings are important keys to reduce accidents and occupational diseases. SSI has continuously improved occupational health, safety and working environment training courses for its staff at all levels including new employees, rotated employees and promotion employees before commencing the work to keep them informed about hazard source, including hazard prevention and control guidelines. On-the-Job Training has also been provided to the Company's employees, sub-contractors and outsourcing employees. Certain trainings are compulsorily provided for some types of positions. The Company also invited external experts with various specific fields to provide additional training courses to broaden the employees' vision and knowledge, apart from the lessons learnt inside the Company.

In addition, Training Matrix has been arranged and classified in the annual training plan pursuant to safety standard, related operational risks and relevant safety laws. This plan required each employees' department evaluate nature of activity/work and working environment of the employees and information obtained shall be sent to the safety responsible agencies to review various risk factors to be used as guideline on allocation of employees who need to be trained in certain courses and appropriateness on refreshment of the courses specified. In 2018, SSI arranged 34 occupational health, safety and working environment training courses, with average training hours of 6.85 hours/person/year. Furthermore, operating standards of all activities have also been reviewed to ensure that they are up-to-date, practical and can keep risks under control.

### Emergency Preparedness and Fire Protection

The Company has managed and prepared readiness on emergency response plan to cope with emergency situations, such as fire, chemical leaks, abnormal condition of boiler or oxygen tank, floods, and etc. The Company appointed an emergency response and fire protection subcommittee as the main body responsible for overseeing readiness of staff in terms of adequacy and potential by providing trainings so that they can suppress emergency incident in timely manner and minimise severity of incident including preparation of readiness of equipment for emergency response. Equipment and tools have always been inspected and maintained to keep them in good condition and are available to be used at all times. Additional fire prevention equipment has been installed in fire risky areas and new technologies are also considered to be employed to improve fire protection procedures. As one of precaution measures, drill and simulation in areas which are prone to have emergency situation are conducted on continued basis.

Moreover, SSI has effected an insurance policy with comprehensive coverage of natural disasters including hurricanes, floods, tsunamis, lightning, landslides, and earthquakes. The insurance provides coverage for the loss of or damage to property and stock as well as business interruption resulting from such incidents and damage due to the fire-risks in all cases.



In 2018, the Company organised 18 emergency drills in all areas. At present, approximately 60% of SSI staffs have attended basic fire-fighting training courses in accordance with the law. The Company also assigned the employees who are appointed to be the fire-fighting team of the plant sites to attend the technical fire-fighting training, advanced fire-fighting training and fire command training courses. Moreover, risky areas and readiness of emergency suppression equipment are constantly inspected to ensure that the installed fire prevention and suppression system are completely and available for usage. With constant inspection on readiness preparation in various aspects, there was only 1 incident in 2018 which can be suppressed immediately and no person has been injured from this incident.

### Safety Management on Raw Materials and Products Transportation

SSI placed importance on safety management on raw materials and products transportation. Performance of the Cargo Transportation Control Working Group of Sahaviriya Group has been followed-up via the Community Leadership Steering Council and Sahaviriya Group's 24 hours Complaint Center. Feedback and complaint will be gathered for improvement. In addition, the Cargo Operation Control Center was set up as a hub to monitor the freight logistic trucks from point of departure to destination, and to receive complaints and suggestions from stakeholders.

In the meantime, various measures have been implemented to control operations of transportation trucks, for instance checking their routes and speed limit in Bangsaphan areas via GPS system 24 hours a day, increasing the number of drivers and limiting their working hours so they can have more resting time, randomly checking their traffic compliance by using CCTV cameras installed in 14 points in the community areas and randomly inspection by the safety inspector patrolling in the community areas. In 2018, 4,455 transportation trips have been randomly inspected by safety inspectors and results showed that there was zero severe offense of safety rules, but the number of general offenses had increased from the year 2017 due to the increased number of transportation trips from 37,488 trips in 2017 to 55,551 trips in 2018. Most of such offences were failure to keep spacing of 50 metres while waiting for the red light at the intersection and at the curve.



### Random Traffic Compliance Check for Sahaviriya Group Cargo in 2018 in Bangsaphan District by the Safety Inspectors

Details	2016	2017	2018
Number of trips	44,298	37,488	55,551
Number of trips randomly checked by safety inspectors	4,620	4,436	4,455
Number of Type 2 offense (General Offense)	299	32	190
Number of Type 1 offense (Severe Offense)	0	0	0

Based on results of such inspection, Sahaviriya Group's Cargo Transportation Control Working Group has implemented a Truck Control Station project in 2019 to control the release time of cargo transportation trucks and to prevent violation of traffic rules.

### Environmental Management

SSI realises that the steel industry plays a part in contributing to the national development and it requires to use natural resources for its production process, therefore SSI has continued focusing on environmental management for sustainable development by strictly adhering to relevant laws of the public sectors and environmental laws, for instance study and preparation of environmental impact assessment report, compliance with preventive, corrective and reduction measures on environmental impact from steel production process including implementation of environmental quality inspection and monitoring measures. SSI also adopted and complied with the ISO 14001 Environmental Management System since 1999 and it has been continuously certified.

The main task lies with the Safety, Environment and Plant Integrity Management Office which works in co-operation with other production units in the plant site. The environmental managers, supervisors and operators in charge of the management and control of water, air pollution and waste systems have been fully appointed pursuant to the law. For operations outside the plant, the Company jointly cooperates with other companies in Sahaviriya Group in Bangsaphan District to promote environmental awareness consciousness and collaboration between the communities and the plant via various activities throughout the year.

### Raw Materials and Products Management

SSI imports steel slabs as raw materials from several sources in foreign countries where quality of raw materials have been controlled to keep them corresponding to standards and meeting the customer's products demand. In 2018, the Company produced 1.5 million tons of hot-rolled steel sheets and 0.198 million tons of hot-rolled steel pickled and oiled sheets.

### Energy Management

SSI realises the importance of energy conservation as it is a main factor for steel production and it will have direct effect on global climate change. Therefore, the Company has set up efficient energy management systems to control and optimise usage of energy in the organisation. The Energy Management Working Group including the environmental and energy experts work together and act as a center to manage energy conservation via the Cross Functional Teams. Their works performed included constantly implementation of energy saving measures, both concerning with direct production process systems and the production supporting systems, such as steel furnace system, motor driving systems, lighting systems, compressed air systems and air conditioning systems, etc. In the year 2018, the Company also participated in government support projects, for example, investment projects to support for replacement and improvement of machinery and equipment for energy conservation, workshop consultation project for electrical energy conservation, boiler enhancement project in the industrial sector, expansion project to increase efficiency of steam production of the boiler with automatic control system and the project to promote the use of automatic control systems and the Internet of Thing system together with energy-saving devices, etc.

In addition to implementing energy saving measures, SSI also places importance on personnel development by providing ongoing budget support for personnel development, as well as encouraging for employee participation in energy conservation activities which could lead to shared energy saving throughout the organisation. Such efforts made SSI receive the Thailand Energy Award 2018 on energy conservation, in type of controlled factory from the Ministry of Energy.



### The Energy Consumption Rate at SSI Bangsaphan Steelworks in 2018

Process	Energy Usage	
	Target	Usage
<b>Hot Rolled Coil Steel Sheets</b>		
• Heat energy (kcal/kg slab)	353.58	359.63
• Electrical energy (kWh/ton)	108.00	108.68
<b>Hot Rolled Steel Pickled and Oiled Sheets</b>		
• Heat energy (kg LPG/ton coil)	2.95	3.35
• Electrical energy (kWh/ton)	20.00	20.18

Actual result of heat energy used in production of hot rolled coils steel sheets was not as per the target because actual production volume is below target, but results of electrical energy are slightly different from the target. In addition, it is found that actual use of heat energy for production of hot rolled steel pickled and oiled sheets is higher than the target because the number of machines which have problem hours longer than 60 minutes are more than those of 2017, causing the increased frequency of stoppage and start-up of boiler system of Sahaviriya Group that it led to the increased amount of heat energy. Actual results on the use of electrical energy are slightly different from the target. In this regard, there is only slightly impact from performance of energy conservation measures during the year towards overall usage of energy when comparing with overall energy consumption of the organisation.

### Water Management

In order to manage water usage, the plant uses raw water from the Bangsaphan canal, a huge surface water source which is 13.5 kilometres. far from the plant. The water is pumped into 2.4 million cubic metres water reservoir. SSI will not pump water from Bangsaphan Weir during dry season when water level in the weir is below 2.2 metres. The plant is also designed to recycle water in the HRC production. The water consumption management within the plant can make SSI be able to keep on production process without having the problem of competing for water which is a common resource shared by the community and local agricultural sector. In the past year, the Company has managed to strictly adhere to the set standard.

SSI has set up a chemical water treatment system to reduce levels of waste water which occurs in Hot Rolled Steel Pickled and Oiled Sheets production line and set up sedimentation tanks, sand filters and grease tanks in the HRC production line including set up the biological treatment system for waste water from consumption within the plant. The quality of water in all systems is constantly tested by the officials and verified by the outside authorities. The treated water is recycled and some of which is used to water plants, with zero discharge outside the plant.

In 2018, amount of water used in SSI Bangsaphan Steel works was 1.18 million cubic metres, consisting of - 1) HRC production line rate of 0.36 million cubic metres; 2) Hot Rolled Steel Pickled and Oiled Sheet production line rate of 0.08 million cubic metres and 3) Consumption water of 0.74 million cubic metres.

### Water Usage of SSI Bangsaphan Steelworks

Production Line	Water Usage (million cubic metres)		
	2016	2017	2018
HRC Production Line	0.23	0.22	0.36
Hot Rolled Steel Pickled and Oiled Sheet Production Line	0.05	0.05	0.08
Consumption Water	0.70	0.72	0.74
<b>Total</b>	<b>0.98</b>	<b>0.99</b>	<b>1.18</b>

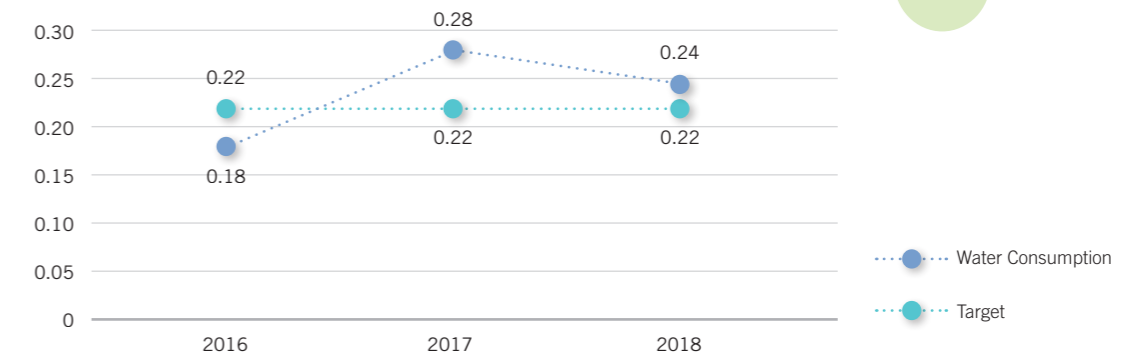


The water consumption per ton of production of SSI Bangsaphan Steelworks is as follows:

1. Production of hot-rolled steel sheets in 2018 with a water consumption rate of 0.24 cubic metres per ton of production Which is slightly worse than the target, which is 0.22 cubic metres per ton of production Compared to 2017, which is 0.28 cubic metres per ton of production or decreased by 14.19%.

### Water Usage Rate of Hot Rolled Coil Steel Sheets

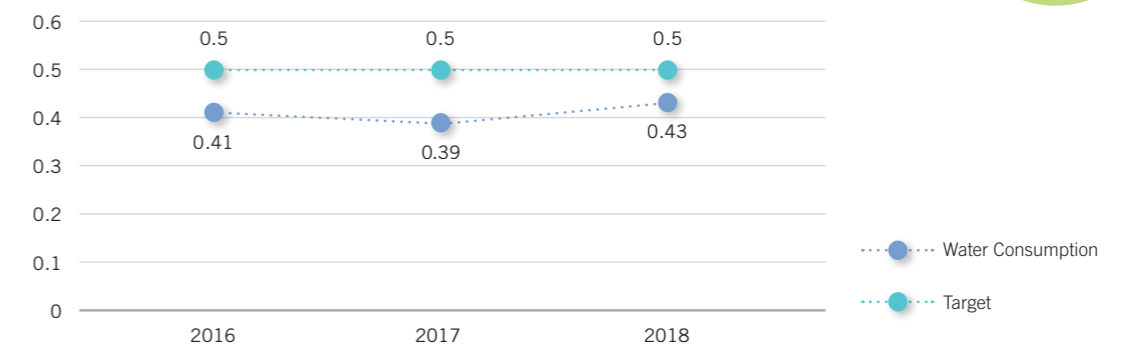
(Unit: cubic metre per ton of production)



2. Production of hot rolled coils, fine and coated steel sheets in 2018 with a water consumption rate of 0.43 cubic metres per ton of production. Which is better than the target at 0.5 cubic metres per ton of production slightly when compared to 2017 at 0.39 cubic metres per ton of production or increased by 10.26% due to increased production volume

### Water Usage Rate of Hot Rolled Steel Pickled and Oiled Sheets

(Unit: cubic metres per ton of production)





## Water Quality Control

Apart from having design process to prevent water discharge outside of the plant (Zero Discharge), SSI also has other water quality control measures within and outside of the plant as follows:

1. Monthly inspection of quality of recycled water at 4 stations carried out by the outside authorised agency approved by the Department of Industrial Works. The outcome proved to be above the waste water standard specified in the Notification of the Ministry of Industry, No. 2 B.E. 2539 (1996).
2. Semiyearly inspection of quality of underground water at 9 stations carried out by the outside authorised agency approved by the Department of Industrial Works. Although Thailand has not yet set the required standard on quality of underground water, SSI maintains vigilance on possible changes and during the past few years and no significant changes have occurred.
3. Semiyearly inspection of quality of surface water in public water resources at 3 stations by the outside authorised agency approved by the Department of Industrial Works in order to ensure that the Company's activities do not affect the environment as detailed in the following chart:

### Environmental Performance Index of Surface Water Quality

Index	Unit	Analysis Result						Standard
		Tha Kham Canal		Upper Mae Ramphueng		Lower Mae Ramphueng		
		Apr 2018	Sept 2018	Apr 2018	Sept 2018	Apr 2018	Sept 2018	
pH	-	7.48	7.52	7.07	8.07	7.14	7.50	5.0 - 9.0 <sup>1/</sup>
Suspended Solid	mg/l	17.80	22.50	14.70	36.00	11.80	12.50	-
Total Dissolved Solid	mg/l	5,010	5,562	3,264	11,170	4,092	3,920	-
Acidity	mg/l as CaCO <sub>3</sub>	33	45	42	32	17	34	-
Alkalinity	mg/l CaCO <sub>3</sub>	57	122	48	105	66	126	-
COD	mg/l as O <sub>2</sub>	41	98	48	70	54	56	-
Grease & Oil	mg/l	< 2	< 2	< 2	< 2	< 2	2	-
Total Coli form Bacteria	MPN/100 ml	790	700	250	330	17	49	No more than 20,000 <sup>1/</sup>
Iron	mg/l	1.40	1.10	1.60	2.10	0.72	2.10	-
Manganese	mg/l	0.30	0.13	0.36	0.26	0.14	0.15	No more than 1.0 <sup>1/</sup>

**Note:**

<sup>1/</sup> Standard: Surface water quality standard (3<sup>rd</sup> Category), Notification of the National Environment Board, No. 8, B.E. 2537

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**Recorded by**

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## Usage of Chemicals

Water production systems for HRC production and Hot-Rolled Coils Pickled and Oiled production require several types of chemicals. In the past year, SSI did not introduce new types of chemicals or increase the rate of chemical usage in production. Moreover, according to ISO 14001 and TIS/OHSAS 18001 evaluation, chemical usage management in the plant is in accordance with the set standard. Suggestions for improvement received have already been included in the implementation plan.

## Green Procurement

In 2018, SSI has purchased 15 groups eco-friendly products as the regulations certified by Thailand Environment Institute (TEI). It was less than the target as 17 groups because of in 2 product groups were not required in this year. Furthermore, SSI has supported the services in three energy-saving projects to meet our target.

In 2019, SSI has planned to purchase in 17 groups eco-friendly products as the regulation of Thailand Environment Institute (TEI) and planned to supported 3 projects of the service for energy-saving.

### Eco-friendly Purchasing of SSI Group

Purchasing Year / Type of Product	2016	2017	2018
Products certified by Thailand Environment Institute and are used in SSI Bangsaphan Steelworks	15	15	15
Products in Energy Saving Project	9	8	3

## Biodiversity

Sahaviriya Steel Industries Public Company Limited (SSI) in co-operation with Sahaviriya Steel Group at Bangsaphan have carried out a survey project on the biodiversity in the surrounding areas of Sahaviriya Steel Group which is the key indicator of the abundance of the eco-system in areas around SSI plant in Bangsaphan District as follows:

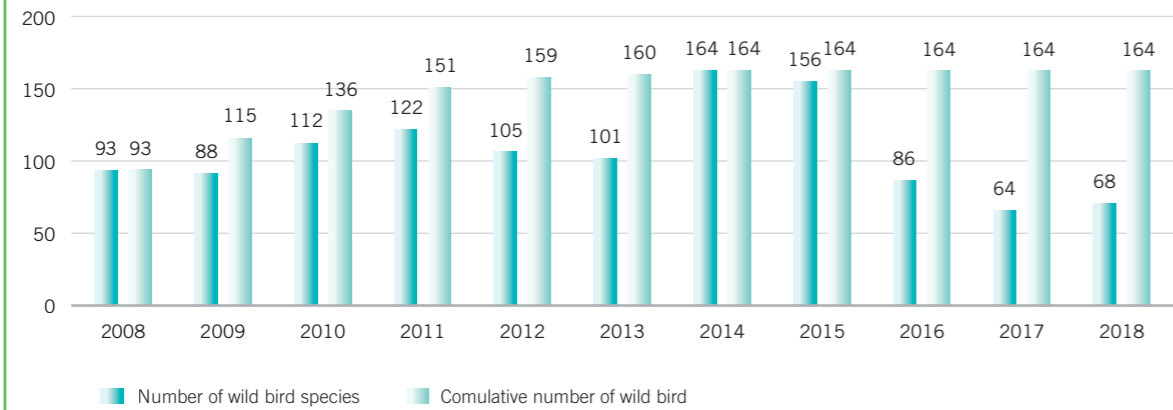
### The Environmental Monitoring Project on Biological Resources

With the commitment in performing the business in accordance with eco-friendly industry, SSI has been conducted to survey the diversity of life in the natural areas near the SSI Group's plant areas, such as Samad-Rub-Peek-Nok Forest, Thung Lan Khwai, Nok-Ka-Rean Field, Mae Ramphueng Mangrove Forest, Pa Klang Aow Natural Park. The environmental monitoring project has been done continuously since 2008. The monitoring project of impacts on wildlife resources and the quality of the environment in the surrounding areas of Sahaviriya Steel Group has been

implemented by specialists from the Department of Zoology Faculty of Science Kasetsart University during 28 - 30 September 2018. The survey result showed that there are several types of wildlife animals (especially birds) in the area around the SSI Group plant. 4 types of animal classification, the total 106 species of wildlife animals were found in the area around the SSI Group plant. There were 100 species of wildlife animals were found from direct sighting, from trace evidence of wild animals and from their voices and 6 species were obtained information from inquiries. They could be classified into 13 species of amphibians, 20 species of reptiles, 68 species of birds and 5 species of mammals. It can be seen that the forests around SSI Group's plant are abundant and are a habitat for a wide variety of wildlife. The data reflects that the steel industry and the operation of Sahaviriya Steel Group are considered to be environmentally friendly. In addition, SSI and Sahaviriya Steel Group continuously operate the system in accordance with the company's pollution management standard, which do not affect the livelihood of wildlife living in natural areas around the plant. It also protects the natural conditions and restores biodiversity to sustain the natural resources for the local community.



### Species of Wild Birds Found in Bangsaphan District



### Climate Change Management

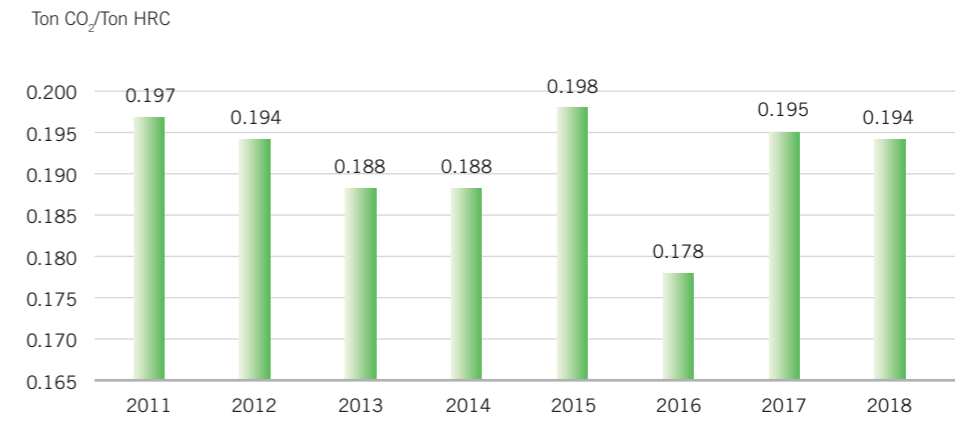
SSI is committed to manage greenhouse gases emitted by the Company's activities by setting up strategy, policy and goal to decrease the greenhouse gas emitted and SSI also continually participated in campaigns and activities with the public and governmental sectors in reducing the increase of global warming. The following activities have been undertaken:

1. Increase the efficiency of energy usage to reduce the greenhouse gas emitted into the atmosphere.
2. Improve the greenhouse gas inventory of its organisation to ensure that they reach standardisation, which include collecting and documenting data, as well as reviewing the greenhouse gas inventory by the outside bodies.
3. Support 3R activities which aim to reduce waste from production process. In 2018, 99.32% of waste could be recycled and reused.
4. Support the natural resources and environmental conservation activities of the local community.
5. Attend seminars on reducing greenhouse gas, organised by the government agencies with aim to achieve low-carbon society.
6. Study about carbon dioxide retention and its usage afterwards.

One of its outstanding works is that SSI has prepared a report on the plant's greenhouse gas emission which was in line with the ISO 14064-1 standard. This report focused on Operational Control, in accordance to its performance, by collecting data on each type of fuel used and on activities causing greenhouse gas. In 2018, the report showed the results of greenhouse gas emission as follows:

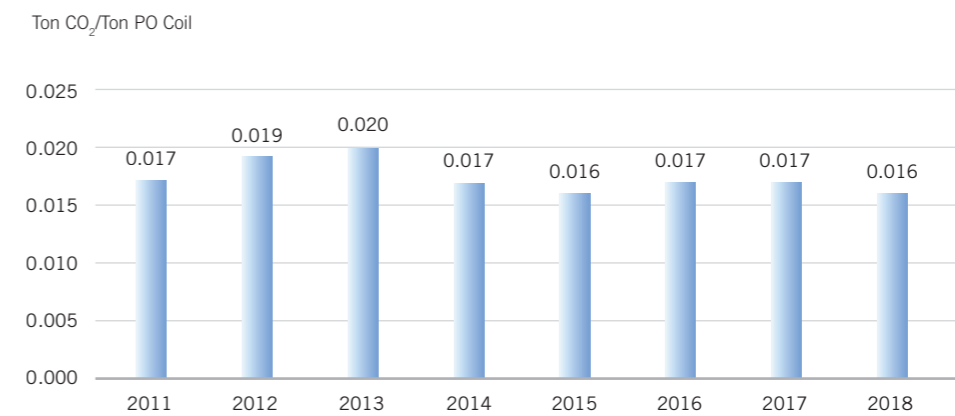
1. The greenhouse gas emitted from HRC production in 2018 was 290,735 tons carbon dioxide per HRC ton, increased by 12.85% compared to 257,634 tons carbon dioxide in 2017 due to the increase in production. However when considering from the greenhouse gas emission rate per unit of output, it was found that in 2018, it equaled to 0.194 tons of carbon dioxide per HRC ton, decreased by 0.51% compared to 2017, which equaled to 0.195 tons of carbon dioxide per HRC ton.

### CO<sub>2</sub> Emission from HRC Production



2. The greenhouse gas emission from Hot-Rolled Coils Pickled and Oiled production process in 2018 was 3,145 tons carbon dioxide, while in 2017, the number was 2,591 tons carbon dioxide, or 0.016 tons carbon dioxide per PO Coils ton, decreased to 0.017 tons carbon dioxide per PO Coils ton in 2017.

### CO<sub>2</sub> Emission from Hot-Rolled Coils Pickled and Oiled (PO Coils)



SSI's carbon dioxide emission is used as an indicator for GHGs, in order to plan and implement a future project to reduce greenhouse gas emission as well as to study the guideline on its removals. Target from average carbon intensity in the past has been considered to improve and specify short-term and long-term plans, so that it can reflect real results of the greenhouse gas management. Moreover, appropriate indicators have been analysed and evaluated to specify target value of carbon intensity which are in line with the development plan of the country which determine to become the low-carbon society.

## Air Quality Control

SSI Bangsaphan Steelworks was designed for efficient consumption of fuel with the computer-run combustion system controlling the sulphur level in the fuel to not exceeding 2%. All these factors made level of air emission outside the plant better than standard levels and requirements specified in the plant's environmental impact assessment report.

With regards to the Hot-Rolled Coils Pickled and Oiled production line, acid gas detection systems have been installed both in the production line and the acid treatment plant for recycling purpose. As a result, level of air emission outside the plant is also better than standard levels and requirements specified in the plant's environmental impact assessment report.

Air quality in the atmosphere around the plant is monitored in various parameters throughout the year. In 2015, 5 stations, namely, Ban Tha Kham, Ban Tha Manoa, Ban Klang Aow, Ban Tubmon and Ban Bor Thonglang were monitored. The air qualities by parameters measured are as follows:

1. Hourly average level of density of sulfur dioxide in the atmosphere
2. Hourly average level of density of nitrogen dioxide in the atmosphere
3. Hourly average level of total suspended particulate (TSP) in the atmosphere
4. Hourly average level of density of hydrogen chloride in the atmosphere
5. Hourly average level of particulate matter less than 10 microns (PM10)

Inspection results of air quality assessments pursuant to the above parameters of all stations were much better than the set standard. In addition results from the previous inspections of all stations and all parameters measured show similar outcome.

## Ambient Air Quality Measured from 5 Stations around the Plant

Index	Average of minimal-maximal quantity of air found		Standard
	9 - 16 Feb 2018	7 - 14 Sept 2018	
Total suspended particulate (mg/m <sup>3</sup> )	0.035 - 0.115	0.030 - 0.0847	No more than 0.330 <sup>1/</sup>
Sulfur dioxide (mg/m <sup>3</sup> )	0.011 - 0.013	0.001 - 0.012	No more than 0.300 <sup>1/</sup>
Nitrogen dioxide (mg/m <sup>3</sup> )	0.014 - 0.042	0.030 - 0.040	No more than 0.320 <sup>2/</sup>
Particulate matter less than 10 microns (mg/m <sup>3</sup> )	0.016 - 0.053	0.014 - 0.042	No more than 0.120 <sup>1/</sup>
Hydrogen chloride (mg/m <sup>3</sup> )	< 0.001	< 0.001	-

**Standard<sup>1/</sup>** : Ambient Air Standards, Notification of the National Environment Board, No. 24, B.E. 2547

**Standard<sup>2/</sup>** : Nitrogen Oxide in the Ambient Air Standards, Notification of the National Environment Board, No. 33, B.E. 2552

**Remark** : < 0.001 is the Detection Limit of HCl  
HCl does not have specific standard

**Measured/analysed/controlled by** : S.P.S. Consulting Service Co., Ltd.  
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**Examined/controlled by** : Ms. Suparat Suttisomboon (๓-011-๓-6648)  
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## Air Emission from the Furnace I and II

Index	Result				Standard
	15 Feb 2018	13 Jun 2018	8 Sep 2018	17 Dec 2018	
Particulate matter (mg/m <sup>3</sup> )	102	142	221	124	No more than 240 <sup>1/</sup>
Sulfur dioxide (SO <sub>2</sub> )(ppm)	368	283	572	409	No more than 800 <sup>1/</sup>
Oxide of nitrogen (NO <sub>x</sub> )(ppm)	99	127	122	105	No more than 200 <sup>1/</sup>
Carbon monoxide (CO)(ppm)	2.3	2.5	4.1	7.9	No more than 690 <sup>2/</sup>

**Standard<sup>1/</sup>** : Emission standards for steel factory (existing source), Notification of the Ministry of Science, Technology and Environment B.E. 2544 (excess air of 50% and at oxygen of 7%)

**Standard<sup>2/</sup>** : Standard of contaminants in air released by the factory, Notification of the Ministry of Industry B.E. 2549 (For production process with fuel combustion)  
Industrial emission standard, Notification of the Ministry of Natural Resources and Environment B.E. 2549

**Measured/analysed/controlled by** : S.P.S. Consulting Service Co., Ltd.  
**Recorded by** : Mr. Adoon Dangklom  
**Examined/controlled by** : Ms. Suparat Suttisomboon (๓-011-๓-6648)  
**Analysed by** : Ms. Wasinee Singpisut (๓-011-๓-6222)  
**Telephone No.** : 0-2939-4370-2

## Air Emission from the Scrubber PPPL (from the Pickling and Oiling Process)

Index	Result		Standard
	14 Feb 2018	10 Sep 2018	
Hydrogen chloride (HCl) (mg/m <sup>3</sup> )	1.2	1.6	No more than 200 <sup>1/</sup>

**Standard<sup>1/</sup>** : Standard of contaminants in air released by the factory, Notification of the Ministry of Industry B.E. 2549 (For production process without fuel combustion, calculated at actual oxygen concentration in emission when measured)  
Industrial emission standard, Notification of the Ministry of Natural Resources and Environment B.E. 2549

**Measured/analysed/controlled by** : S.P.S. Consulting Service Co., Ltd.  
**Recorded by** : Mr. Norapat Tanapernprecha  
**Examined/controlled by** : Ms. Suparat Suttisomboon (๓-011-๓-6648)  
**Analysed by** : Ms. Wasinee Singpisut (๓-011-๓-6222)  
**Telephone No.** : 0-2939-4370-2

### Air Emission Quality from Boiler

Index	Result		Standard
	14 Feb 2018	10 Sep 2018	
Particulate matter (mg/m <sup>3</sup> )	4.6	6.2	No more than 120 <sup>1/</sup>
Sulfur dioxide (SO <sub>2</sub> )(ppm)	10	0.2	No more than 800 <sup>1/</sup>
Oxide of nitrogen (NO <sub>x</sub> )(ppm)	56	51	No more than 180 <sup>2/</sup>
Carbon monoxide (CO)(ppm)	2	2.9	No more than 690 <sup>1/</sup>

**Standard<sup>1/</sup>** : Emission standards for steel factory (new source), Notification of the Ministry of Science, Technology and Environment B.E. 2544 (excess air of 50% and at oxygen of 7%)

**Standard<sup>2/</sup>** : Standard of contaminants in air released by the factory, Notification of the Ministry of Industry B.E. 2549 (For production process with fuel combustion)

Industrial emission standard, Notification of the Ministry of Natural Resources and Environment B.E. 2549

**Remark** : < 0.1 is Detention Limit of SO<sub>2</sub>

**Measured/analysed/controlled by** : S.P.S. Consulting Service Co., Ltd.  
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### Air Emission Quality from Dust Collector

Index	Result		Standard
	14 Feb 2018	10 Sep 2018	
Particulate matter (mg/m <sup>3</sup> )	5.7	5.5	No more than 120 <sup>1/</sup> , 300 <sup>2/</sup>

**Standard<sup>1/</sup>** : Emission standards for steel factory (new source), Notification of the Ministry of Science, Technology and Environment B.E. 2544 (excess air of 50% and at oxygen of 7%)

**Standard<sup>2/</sup>** : Standard of contaminants in air released by the factory, Notification of the Ministry of Industry B.E. 2549 (For production process without fuel combustion, calculated at actual oxygen concentration in emission when measured)

Industrial emission standard, Notification of the Ministry of Natural Resources and Environment B.E. 2549

**Measured/analysed/controlled by** : S.P.S. Consulting Service Co., Ltd.  
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### Waste Management

The Company is committed to reduce quantity of waste at source by applying the 3R's – Reduce, Reuse and Recycle.

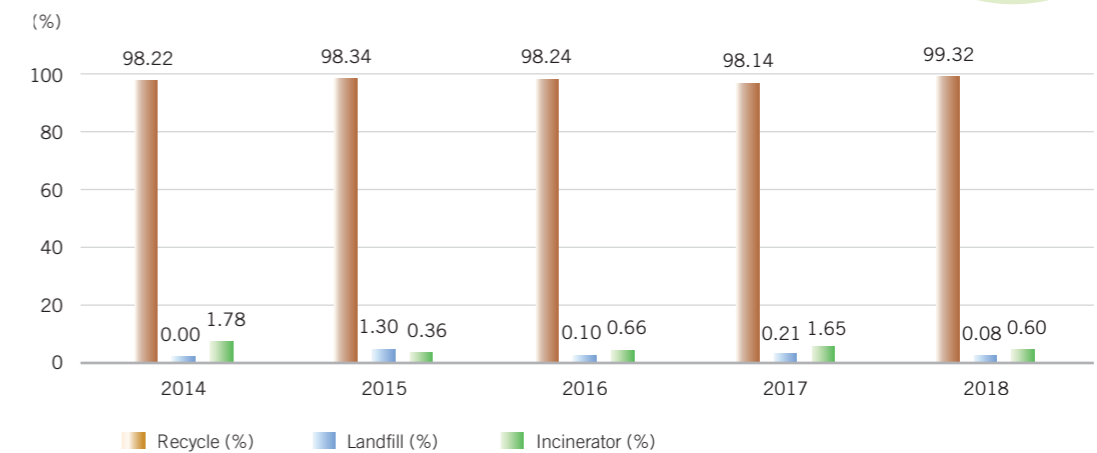
- **Reduce:** Reducing waste at source and encourage efficient use of resources such as general waste, waste grease and waste oil etc.
- **Reuse/Recycle:** Reusing the waste or re-processing through recycling to minimise waste or maximise its usage, such as reducing contamination of existing oil and recycling waste, change waste disposal method from landfill to recycling for maximum usage and wasted food was used to make fermented bio-extract then distributed to staff.

Moreover, apart from applying 3R's to reduce waste at the original source, SSI also disposes of waste with minimal environmental impact as follows:

- **Disposal:** Disposal or pretreatment of waste. SSI uses services of well-known waste processor with expertise and certification by the authorised government agency.
- **Industrial waste management:** SSI employs industrial waste pollution controller, to ensure that the operation has been performed correctly and in compliance with the laws.



### SSI's Disposal of Waste in 2014 - 2018



In 2018, the total waste amounted to 68,777.945 tons, waste management cost was Baht 10.36 million and sale of 57,171.57 tons of waste amounted to Baht 31.20 million. The processes used to dispose waste are by recycle (99.32%), by incinerator (0.60%) and by landfill (0.08%).





## Cooperation with External Organisations

The company intends and voluntarily participates in climate change mitigation projects and activities with government agencies and external organisations. Key projects and activities participated in 2018 are as follows:

1. Thailand Voluntary Emission Trading Scheme: Thailand V-ETS. SSI has participated in this project with Thailand Greenhouse Gas Management Organization (Public Organization) or TGO for three consecutive years since 2016 to 2018 that it received a certificate of appreciation from the Ministry of Natural Resources and Environment for such participation. Outcome from project operations is that greenhouse gas emission license of steel industry is specified to be Carbon Intensity Emission (tCO<sub>2</sub>/t product) and greenhouse gas reduction target of the steel group is 2% from the base year.

2. Life Cycle Assessment (LCA) Project of Steel Industries jointly with the World Steel Association (Worldsteel). SSI has collaborated with the World Steel Association (Worldsteel) on collection of Life Cycle Inventory (LCI) data, which is based on the scope of Gate-to-Gate calculation by taking into consideration the production process. Worldsteel has assessed LCA and also further applied model for upstream assessment for SSI and results from LCA assessment made SSI acknowledge significant impacts on environment and comparison with average data at global and regionally levels.

3. Collaboration and development project with South East Asia Iron and Steel Institute (SEAISI) through Environment & Safety Committee (ESCO) Working Group Representative from SSI was continuously nominated as ESCO's chairman. The role of ESCO is to exchange information on technologies in aspect of environment, energy and safety among country members and to drive for joint study projects as follows:

a. Compilation of the Best Available and Commercial Technologies (BACT) on reduction of greenhouse gas and environmental impacts of iron & steel industries in ASEAN.

b. Special Fund Activity (SFA) Project. SSI has collaborated with Iron and Steel Institute of Thailand (ISIT) to request funding from SEAISI. The purpose is to organise seminar in the topic of Hazardous Substance and Industrial Waste Management Technology for Thai's Steel Industry in 2018.

4. Energy Conservation Measures for Iron and Steel Industries. SSI in co-operation with the Iron and Steel Institute of Thailand (ISIT) has prepared a draft energy project on provision of grant to promote and support energy conservation to propose to Department of Alternative Energy Development and Efficiency (DEDE), Ministry of Energy. The objective is to promote energy conservation of 3 groups in iron and steel industries, including EAF group, hot rolled group and cold rolled, coating and pipe group in order to respond to the government's energy conservation plan on reduction of energy consumption by 30% by the year 2036.

5. In-depth demonstration project for energy conservation, Phase 4 with Department of Alternative Energy Development and Efficiency (DEDE). SSI has participated in the project to request for support fund by changing its 5 heatless regenerative air dryers to heat regeneration zero loss. This new method can save energy consumption for dry air production because it does not have to waste approximately 20% of dry air generated for desiccant regeneration like the old method.

6. Cooperation and investment support project with Department of Alternative Energy Development and Efficiency (DEDE). After completion of project, financial incentive will be approximately 20% of investment fund as follows:

a. Project to support investment on replacement and improvement of machinery and equipment for 80/20 energy efficiency plan for 2 measures (80/20), such as replacement of existing conventional lamps with LED lamps and replacement of chiller. Investment support fund received was Baht 1,094,880. Reduction of electrical energy of 949,357.99 kWh, reduction of electricity charges of Baht 3,051,434 and reduction of 549.68 tCO<sub>2e</sub> of carbon dioxide emission.

b. There are 2 measures under the project to promote the use of automatic control systems and the Internet of Thing system together with the energy-saving devices, i.e. upgrading roll grinding machine No. 3 and VSD No. 2 for descaling pump. Investment support fund received was Baht 3,587,787.38. Reduction of electrical energy of 1,582,575.80 kWh, reduction of electricity charges of Baht 5,206,674.38 and reduction of 916.31 tCO<sub>2e</sub> of carbon dioxide emission.

c. Project to support investment on replacement and improvement of machinery and equipment for energy conservation of water treatment system of the control plant, for instance, increase efficiency on usage of energy consumption in backwash of pressure sand filler. Investment support fund received was Baht 30,000. Reduction of electrical energy of 176,924.218 kWh, reduction of electricity charges of Baht 582,080.677 and reduction of 102.44 tCO<sub>2e</sub> of carbon dioxide emission.

Moreover, in 2018, SSI also participated in many energy and greenhouse gas emission reduction projects with the public sectors, such as, the Joint Crediting Mechanism (JCM) which is the study project to request for investment fund and technical support from the Japanese government. These study projects signified strong intention and determination on reduction of greenhouse gas of the organisation which is in line with the national plans on reduction of energy consumption and greenhouse gas emission.

## Green Industry

SSI signed the memorandum of co-operation to develop a Green Industry with the Ministry of Industry as it recognises the importance of co-existence between the industrial community and the social and environmental factors. Under this umbrella, SSI has been certified in the Third Level Green Industry (Green System), due to our systematic environmental management and monitoring for continuous development, since 2011 to 2018. SSI expects that the year 2019 will be certified the Fourth Level Green Industry (Green Culture).



## Surveying Local Attitudes and Local Participation on Environment

A survey on attitudes of the community is conducted annually among the communities around the plant. The communities are important stakeholders for SSI because the operation of the plant affects them economically, socially and environmentally in both positive and negative ways. Thus, an attitude survey enabled the Company to understand their perception through community leaders and household leaders on various effects from the operation of the plant throughout the year. It also paves the way to joint decisions through participatory meetings, for example, community leader council meetings and village meeting. SSI has used suggestions from these meetings as a basis to arrange programmes that directly respond to the need of the community and lead to sustainable local satisfaction.

Surveys made in 2018 show that most locals accepted and appreciated that the Company has played a part in improving income generation, better commerce and infrastructure. Such activities included donations for educational purposes, aquatic animal conservation, career development, community-banking and mangrove forest conservation. The top priority was tree-planting, followed by Mae Ramphueng mangrove conservation, aquatic animal conservation, donations for educational purposes, beach-cleaning, monetary/educational equipment donations for community education, local environment safeguarding, youth camp and other activities.

There are 3 concerns, resulting from the survey in 2017, including traffic congestion 8.5%, accidents from traffic 7.7% and defective transportation routes 1.6%. Top 3 concerns in 2017 were traffic congestion 5.3%, accidents from traffic 4.0% and defective transportation routes 1.3%. Therefore, it could be seen that their major concern was still traffic problem. To alleviate community concerns about traffic issues, the company has partnered with transportation companies by specifying additional measures to monitor and supervise more effectively as follows:

1) Cooperation with the Transportation Bureau, Bangsaphan Industrial and Community Education College and other government agencies involved in order to educate the drivers in maintaining their vehicles, safely driving and 100% compliance with traffic rules.

2) Program to support and train the community personnel to become professional drivers. At the end of the course, they will be offered the opportunity to become employees of the transportation company, which can encourage the local people to have a job and help regulate traffic safety.

3) Provide a rest area for the driver to take a break and be checked for readiness on their health.

4) Increase the capability of the Operation Control Center to inspect the traffic and speed in Bangsaphan area via GPS system 24 hours a day.

5) Support and provide traffic safety equipment to Village security guard/group in Bangsaphan District to help oversee the traffic of general cars and cargo trucks of the SSI Group.

6) Training the village security guard/group on rescue and assistance skills in case of emergency on traffic or basic fire.

7) Increase traffic monitoring point on compliance with traffic rules of bus transportation by installing 4 additional CCTV cameras along the route in Bangsaphan.

8) Increase the number of drivers so they can drive alternately to get more leisure time under the "TAG TEAM".

These measures are supplemental parts from the routine works, such as time management to release freight car, avoid heavy traffic durations, control not to overload exceed than specified by the law, installation of CCTV, car patrol arrangement, establishment of the Sahaviriya Bus Transportation Fund and Seminar for transport operators.



## Social Performance

### Creating Customer Value and Fair Operating Practices

SSI recognises the importance of customer satisfaction and its effect on successful business, therefore specific focus is placed on ensuring best practice is achieved to effectively and efficiently respond to customer's needs. Furthermore, fair operating practices with business partners are always carried out in order to create appropriate benefits for both parties. The Company ensures that correct reports and facts are provided to customers and performs in line with contracts and the Company is committed to negotiating appropriate solutions based on business relationships, avoids business conflict situations and adheres to fair treatment.

### Innovated Value Products

In 2018, the Company has set up activities to strengthen relationships with customers, particularly in relation to resolving problems, handling customer complaints, and receiving feedback and suggestions. The data from the activities is used to develop product services and quality to meet the needs of the customers. Activities undertaken included customer visits, meetings with key customers on a monthly basis, annual customer satisfaction surveys, training and providing further knowledge of the company's products. SSI also provided advice and assistance to clients to support them in resolving any problems associated with the Company's products.

Our Innovated Value Products Working Team has carried out these activities to analyse customer needs, by working with the Production Team to drive the development of products and services quality. Improvements made include, controlling product dimensions to reduce customers' loss, specially designing product properties according to customers' requirements and enhancing transportation efficiency to achieve on-time delivery for urgent orders. These will support customers to broaden their performance and expand marketing opportunity. Further important developments are as follows:

1. Developing SG295+ (SG high strength) for gas cylinder application
2. Developing Enamel steel for HAEA application
3. Developing IVP: Control narrow thickness tolerance 50% of JIS G3131, creating value added to customers for automotive industry and special use customers.

In 2018, SSI had delivered 732,461 tons of Premium Value Products (PVP) which represent 51% of the total sales.

### Create Shared Value with Business Partner

Annual seminars with suppliers and service providers were conducted to clarify company regulations, procurement purposes and procurement practices for Sahaviriya affiliated companies. Moreover, the Company has been supporting additional jobs for local suppliers in Bangsaphan District, by purchasing local products from various groups. The Company established Local Market @ SSI Project to support good quality OTOP from the housewife groups in various subdistricts in Bangsaphan District to be sold in the Company. This will help local product to be well-known and increase income for local vendors.



In 2018, the Company purchased products from general vendors at approximately Baht 2,470 million which can be classified as follows: Baht 1,080 million for energy product group, Baht 205 million for spare parts, Baht 307 million for factory supplies, Baht 171 million for consumable parts, Baht 171 million for Tangible Fixed Asset and Capital Expenditure, Baht 517 million for services, Baht 19 million for others, and Baht 252 million for local purchases in the Bangsaphan community. For 2018, it is expected that procurement costs will be raised up to Baht 2,750 million from general vendors and Baht 280 million from the local community.

### Fair Trade Practices

The Company realised about fair treatment with trade competitors by complying with the rules and laws of the government sectors, such as Trade Competition Act B.E. 2560 and the Company would not seek for trade secret information of any trade competitors by using dishonest or unappropriated means and would not destroy reputation of any trade competitors by means of slander. In addition, the Company is the backbone on establishment of The Association of Thai Hot-Rolled Flat Steel where the management of the Company, the management of the trade competitors and trade partners are the committees. All parties held joint meetings and activities regularly and the Company also met with the management of the trade competitors to strengthen good relationship as well as exchange experiences, support as well as drive for fair trade policy and competition through government agencies or other relevant agencies.

Moreover, the Company also played a leading role in promoting cooperation of 7 national steel manufacturing associations, which have totaling 472 companies as members to strengthen steel manufacturers of Thailand by jointly pushing for public sectors' policies in order to drive the national steel industries to 4.0 steel industries.

### Innovation, Research and Development

Sahaviriya Steel Industries (PCL), in 2019, has a strong intention to develop the potential of steel industry by strengthening people in the organisation first. Consequently, SSI established the project of School of Engineering (SoE) to provide sophisticated engineering knowledge and technology information for employees, which will be beneficial for their work and enhances the business competencies.



The contents provided in the project include; (1) Material Engineering (2) Process and Production Application Engineering, (3) Mechanical and Electrical Engineering (4) Industrial Engineering (5) Automation Engineering (6) Energy Engineering (7) Environmental Technology Engineering (8) Project Management Engineering. To ensure that the knowledge and experience sharing are from reliable sources, the company invited experts, domestically and internationally, to share the knowledge to SSI's Employees.

With regard to research and development, the company has also coordinated with the academics, institutes, and universities (i.e. National Metal and Materials Technology Center, Synchrotron Light Research Institute (Public Organizations), Metallurgy and Materials Science Research Institute (Chulalongkorn University), and King Mongkut's University of Technology North Bangkok) to conduct the researches in order to continuously develop products and innovations that serve and support steel industries.

Additionally, the Company has also continually run the project of Structural Steel Improvement (SSI) for Young Engineers for the second year in 2018 - 2019. For this year the company has awarded 7 scholarships (the value of each scholarship is of Baht 20,000) to the students (Kasertsart University 4 teams, King Mongkut's University of Technology Thonburi 2 Teams, Ramkhamhaeng University 1 team) who applied the senior projects related to flat steel products to SSI.

### Anti-Corruption

The Board of Director places a strong emphasis on conducting business under the principles of good corporate governance and social responsibility which is intended for sustainable development. The Company deems that corruption is harmful and causes great damage to organisations and the nation. The Company therefore fully supports the implementation of the anti-corruption policy. As a result, on 22 January 2016, the Company was certified by Thailand's Private Sector Collective Action Coalition Against Corruption Project (CAC) and became a member of CAC. In 2018, the Company carried out several anti-corruption initiatives as follows:

**The Company established supervision and control practices to prevent and monitor fraud and corruption risks, which were summarised as follows:**

#### 1. Policies and Guidelines on Anti-Corruption

The Company promulgated the policy and guidelines regarding anti-corruption in 2013 and continuously abided by them to confirm its intent and expectations to fight against corruption.

The anti-corruption policy states that Directors, Executives, and all employees are prohibited from accepting or being involved in any type of corruption either directly or indirectly. The Company shall act strictly in enforcing compliance with Thai anti-corruption laws and regulations, and those of each country in which the company conducts its business. The Board also determined that the company's subsidiaries and its jointly controlled companies shall adopt this anti-corruption policy including any guidelines issued by virtue of such a policy.

The anti-corruption guidelines provide guidance on offering or receiving gifts or entertainment or hospitality activities, granting contributions or donations to charities or common wealth, and political contributions. Guidance on reporting of suspected fraud or corruption is also provided. This policy and guidelines were developed in addition to the "SSI WAY" including the Company's commitment to ethics which is mentioned in business philosophy, integrity which is mentioned in business ethics, employee ethics and values, as well as the ethical conduct for employees on conflicts of interest which is mentioned in the Company's guidelines regarding conflicts of interest.

#### 2. Communication of Policies and Guidelines on Anti-Corruption

The Company recognised the importance of communicating policy and guidelines on anti-corruption. They were communicated by an e-mail and internal newspaper. All employees were able to access to this policy and guidelines which were posted on the company Intranet and also available on the Company's website: [www.ssi-steel.com](http://www.ssi-steel.com). Moreover, at the annual supplier seminar which is held once a year, the Company's Anti-corruption policy will be communicated to all suppliers who attended the seminar and they were required to comply with this policy. In 2018, the annual supplier seminar was held in March.

#### 3. Training

The Company has continually provided training to encourage executives and employees to be aware of anti-corruption and to ensure that employees truly understand and can comply with the anti-corruption policy and guidelines. In 2018, the Company continued to deliver refresher training of employee awareness promotion to 210 employees (79 employees at Bangkok office and 131 employees at Bangsaphan office). Moreover, a topic on the anti-corruption policy was included in the mandatory orientation program for new starter which will be held quarterly.



#### 4. Putting Policies into Practice

The Anti-corruption working committee has been appointed since 20 July 2015, to put the anti-corruption policy into practice and to enable the Company to maintain what it has been doing as a certified company of Thailand's Private Sector Collective Action Coalition Against Corruption. This is to express the Board's commitment and intent on Anti-corruption and to ensure that the Company has an anti-corruption measures monitoring, a delegation of power and a clear responsibility to implement the anti-corruption policy. In 2018, The Anti-corruption working committee prepared and reviewed a self-evaluation tool to ensure that the Company is ready to enter the recertification process. In September 2018, the Company joined the National Anti-Corruption Day 2018" which was organised by the Anti-Corruption Organization of Thailand (ACT), under the theme of "Thai people refused to be corrupted".

#### 5. Fraud and Corruption Risk Assessment

The Company assessed risk of fraud and corruption by the risk owner of each division who identified events where fraud and corruption risk might occur in his/her area, assessed the likelihood and impact, reviewed and designed appropriate measures to combat fraud and corruption. The Group Risk Management Office then collected their results and proposed them to the Risk Management Working Committee for consideration before submission to the Risk Management Committee and the Audit Committee for acknowledgement. This is done annually.

**The Company determined guidelines on monitoring and evaluating compliance with the anti-corruption policy as follows:**

##### 1. Whistle-Blowing System

The Company provided Whistle-Blowing channels for stakeholders to raise concerns about offenses against the law, unethical practices, poor or unacceptable practices, abuse of authority, irregularities, corruption, fraud or misconduct, violations of the company's conflict of interest policy, abuse and disregard of company policy, guidelines, instructions or procedures, fraudulent financial reporting, deficiencies in internal control systems or any action that may cause damage to the informants or the company, without fear of retribution by having measures to protect the

informants or whistleblowers. The Company also provided measures to review or investigate the whistleblower's concerns and the imposition of punishment of offenders. All the whistleblower's concerns that were raised with the Good Corporate Governance Committee were to be tracked and examined, resolved and responded to informers as soon as possible. These were also reported to the Audit Committee for acknowledgement. Moreover, a summary of the Good Corporate Governance Committee's activities were also reported to the Board of Directors twice a year. In 2018, there was no event report from Whistle-Blowing System.

##### 2. Internal Audit

The Group Internal Audit Office participated in an assessment to assure and advise on good corporate governance, risk management and internal control. The Company's internal control was assessed by the Group Internal Audit Office together with the management every six months especially the assessment of risk factors relating to misstatements arising from fraudulent financial reporting or misappropriation of assets. The Group Internal Audit Office also developed an audit coverage plan and an annual audit plan using a risk based approach including fraud and corruption risk. The audit engagements were conducted following the annual audit plan that has been approved by the Audit Committee and the audit results were reported to the Audit Committee. In 2018, the Group Internal Audit Office reviewed the corruption prevention controls in order to ensure compliance with the relevant applicable laws and standards such as the Organic Act on Counter Corruption B.E. 2542 (1999).

##### 3. The self-assessment and monitoring for compliance with Business ethics and Employee ethics

The Company continually surveyed its employees about their perceptions and compliance with the Company's Code of Conducts including Business ethics and Employee ethics by using the self-assessment questionnaire as a tool. Not only the perceptions and compliance with the Company's code of conducts but also the anti-corruption policy was also surveyed. The objectives of the survey are to improve the effectiveness of internal communications to ensure employees understand the Company's Code of Conduct and anti-corruption policy and to monitor and assess employees' compliance with them.

## Human Resources and Right

The Company recognises the importance of human resources that they are essential to the organisation's business success. We have determined the appropriate structure of employment, compensation and benefits, personnel development and the Company has continued the Care Organization Project to promote activities related to employees and their families, creating efficient collaboration and working relationships between employers and employees. The project supports employees to achieve an appropriate work life balance by considering their personal life and family. In addition it encourages employees to demonstrate good values and act as role models.

### Employee Structures

In 2018, SSI employed 1,140 people; 187 at the Bangkok office and 953 at the Bangsaphan Steelworks. The employee structure recognises levels of employee as follows:

#### SSI Group Employee

SSI Group employee level	SSI	TCRSS	WCE	PPC	Total
Executive level	51	8	3	0	62
Managerial level	196	71	38	3	308
Supervisory level	449	213	154	31	847
Operational level	444	573	357	54	1,428
<b>Total</b>	<b>1,140</b>	<b>865</b>	<b>552</b>	<b>88</b>	<b>2,645</b>
SSI Group employee level	160	140	183	0	483

(Number of Employees of SSI Group: as at 31 December 2018)

### Employment

The Company has a policy to encourage employees to consider promotion and rotation of roles. The policy looks to appoint internal employees into roles who have the appropriate knowledge and qualifications. If there are no suitable current employees for a required role, the Company will recruit potential external candidates. Recruitment policies are open to all genders, races, religions, ages of 18 years and over, providing the person is appropriately qualified and competent. The Company conducts interviews with fairness and effectiveness in recruitment and selection. In 2018 the Company had 206 job vacancies with 491 potential candidates and 182 people were successfully recruited into these roles; 123 newcomers and 59 transferring employees within organisation. As for the underprivileged, there are limited positions because of job characteristic. The Company also has contributed to the Empowerment of Person with Disabilities Fund through the improving quality of life of people with disabilities.

## Employee Development

The Company has established guidelines to develop staff to be consistent with the vision, mission and strategic plan according to the competency based guidelines to recognise talented staff and support the development of staff, in accordance the SSI Way. In 2018 SSI has arranged training courses as follows:

### Training and Development of SSI Staff in 2018

Guideline	Method	Outcome in 2018
On-the-Job Training (OJT)	Set standards of necessary knowledge and skills to different tasks and assigned supervisors to coach and train staff to enable them to perform in accordance with the knowledge and skill levels required. The supervisors will regularly monitor the outcomes and performance.	183 people
In-House Training	<ol style="list-style-type: none"> <li>In-House Training inviting internal and external speakers with knowledge and expertise in various fields</li> <li>Organise Knowledge Sharing activities to share work experience</li> </ol> The content about: Management Workplace Behavior Technical Competency Productivity Occupational Health and Safety etc.	146 courses (216 times) 1,140 participants Average training period 25.77 hours/person/ year
Staff Development - talented and good staff through the SSI Way	Staff development activities to recognise knowledge and awareness/ Core competency "iFacts"	19 activities 959 participants
Domestic and Overseas Training	Appoint staff to undertake training courses held by external organisations, both domestic or based overseas	321 courses 223 participants Average training period 13.31 hours/person/year
Acknowledge the Annual Division Goal Program 2018	Managerial level executives and upwards were informed about policy and strategies through Goal Program Presentation, by each division.	192 participants (Managerial and above level)

## Employee Relations

The Company recognises the importance of building relationships between employees and management to create an effective work environment and to provide employees with a balance between work life and family life (Work Life Balance). The Company has therefore maintained the "Care Organisation" project which has included the following activities:

- Meet Management: The following activities have been put in place to establish a relationship between employees and management:
  - Annual policy statement: President informed managerial level staff about the strategic plan and company policies.
  - Goal Program Presentation: Managers and above reported their annual plans twice a year to support the company strategy and business plan. This allowed other managerial staff to share their plans and received comments and suggestions for improvement from the Management Committee.
  - Announce Division Annual Strategic Plan: Each management division presented to their staff the division strategy to create awareness and improve all employees understanding.
  - Executive meeting and participate in activities together: Management have visited the plants to participate in company activities such as sport, voluntary work, blood donations and merit in the New Year. These activities supported the Company's agenda to promote talented and good staff through the SSI Way and Promoting Corporate Value activities.
  - Increasing the well-being of employees and their families: Project activities have been set up such as Happy Family Project for 120 families, Family Day, Children's day and Volunteer Project for on fire and flood disaster.
  - HR Clinic: The Company arranged HR consulting staff to advise employees on any HR queries, for example company rules & regulations, salary, personal tax, etc.



## Welfare and Benefits

SSI places a focus on the welfare and benefits of employees and complies with the relevant legislation on employment such as leave days and holiday leave. Moreover, the Company provides the following welfare and benefits appropriate to the relevant working conditions:

- Annually 2 uniforms
- 5-route transportations for staff in Bangsaphan to travel into the office
- Monetary support for staff who live outside of the Bangsaphan District area
- Free rice and inexpensive food for staff
- Upcountry allowance for staff who work at Bangsaphan Steelworks
- Travelling allowance support for employees who work in other locations and overseas
- Provident fund for employees on retirement
- Internal sport, Sport Day and Anti-Drugs Sports
- Organises "Staff Health Week" campaign to support staff to learn to take care of their health
- Organises Drug Free Workplace Project to protecting and solving drug problems in organisations
- Organises lectures on HIV/AIDs
- Health and life insurance and travel insurance for overseas business trip

### Creative Internal Communication

In order to build good relationships and encourage understanding between the organisation and all staff levels, SSI focuses on creative internal communication via many channels as follows:

Communication Channel	Objective	Outcome 2016
Message from the Group CEO and President and Management (interviews with executives and publish on the intranet and internal TV)	To inform and make all staff aware of policies, operation directions and major performances of the Company directly from the Group CEO and President and the Management	5 times
Goal Program Presentation	To allow all staff of managerial level and upwards to acknowledge and share their opinions on the direction and business operation. This is performed for the Company in overview and for different departments to allow clear communication between teams.	2 times
Voice on the Line	To provide information to staff directly from the management team to help them understand the business vision or related operation.	5 days/week
Morning Talk (monthly/weekly)	To allow managers and staff to have a two way communication system to update on news related to the company and to solve any work issues.	1 day/week
Face to Face Workforce Visit	To visit staff at their operational locations to provide information and news about activities being held in the Company as well as asking them for their opinions and suggestions.	5 times
Employee Relations Staff Visit Shift Staff at Their Workplace	To visit night shift workers at their workplace and gain their opinion and provide them suggestion.	12 times
Welfare Committee	To communicate employees' requirements to the management team and strengthen the relationship between executives and staff.	4 times
Electronic Newsletters	To publicise updated information and activities of the Company. The newsletter includes completed and future projects to provide useful information related to daily life and health.	472 times
SSI Way Understanding Activities	To help employees learn and understand the "SSI Way" which are the values that the Company encourages staff to demonstrate - "good person", "talented person" and "qualified person" who will help develop both the organisation and the society.	12 activities
Internal TV	To distribute major information to all staff quickly	327 times
Communication via Social Media (Facebook, Page-SSI Employee Relations and Welfare)	Social media is used as a two way communication tool to inform staff about updated information regarding the organisation. The communication can be made via both the internet and smart phone.	814 messages

### Social Capital and Community Development

SSI has continuously focused on social and community development on sustainable basis in order to strengthen its stakeholders by adhering to three fundamentals: creativity, stakeholder engagement and operation efficiency. In 2018, the Company operated 44 social and community development projects (inclusive of 20 SSI Arsa projects), which benefited 17,874 stakeholders. These projects are divided into two parts: (1) Social capital development to strengthen the underprivileged and (2) Community development which emphasized on 4 aspects: education, environment, occupation and income, good quality of life as well as religion and local cultural support.

#### Social Capital Development

##### Sahaviriya Bangkok Triathlon 2018

The Company joined hand with The Foundation for Life Development under the Patronage of H.R.H. Princess Galyani Vadhana Krom Luang Naradhiwas Rajanagarindra to arrange the 7<sup>th</sup> Sahaviriya Bangkok Triathlon 2018 on 7 - 8 July 2018. Funds raised were used to support operations of the Foundation for Life Development on public benefits concerning improvement of quality of life of Thai people, promotion of water conservation, stimulation of tourism, and for physically and mentally enhancement. There were more than 900 Thai and foreign athletes participating in this year event. Fund gained from registry fee were donated to the Foundation for Life Development, Foundation for helping children and youth under custody of Department of Juvenile Observation and Protection, Tulakarn Chalermprakiat Hospital, Court of Justice.



##### Kon Lhek Mini Marathon 2018

The Company, and its steel industry partners, namely, Thai Cold Rolled Steel Sheet Public Company Limited (TCRSS), NS-Siam United Steel Co., Ltd. (NS-SUS), NS Blue Scope (Thailand) Limited (NS Blue Scope) and JFE Steel Galvanizing (Thailand) Co., Ltd. (JSGT) jointly arranged "Kon Lhek Mini Marathon 2018" on Sunday, 16 December 2018 at Stadium One. There were more than 1,000 participants for this year event which could raise fund (without deducting expenses) of 2.6 million to support 25 foundations for the underprivileged. This event which arranged for 11 consecutive years could raise fund more than Baht 26.6 million in total.

#### Community Development

In 2018, SSI has carried out 40 community development projects which reflected our commitment to be the good citizenship and to earn trust from Bangsaphan locals and stakeholders with ultimate objectives to build up strength and well-being of the community and the society. These community development activities of SSI focused on engagement from everyone, including SSI staff, locals and related organisations in the following aspects: education, environment, occupation and income, good quality of life, religion and cultural support and "SSI Arsa," public mind project development among SSI staff.



## Jointly Developing Quality of the Community Education

### Sahaviriya Funds for Bangsaphan Educational Development

Sahaviriya Funds for Bangsaphan Educational Development Project emphasised on development of quality of education in Bangsaphan District in 3 dimensions (school, teacher and student) with co-operation from the Office of the Basic Education Commission (OBEC) and from the Office of Prachuap Khiri Khan Primary Educational Service Area Zone 1. This project invited the qualified schools to submit the 3-year education quality development plan to compete for the development fund. The winning's school will receive fund to develop the school as per the proposed plan. This project commenced since 2011 and the present one is the 7<sup>th</sup> batch. In 2018, there were 7 schools from 3 batches under project operations, for example, the 5<sup>th</sup> batch which commenced in 2016 comprising Ban Thong Mongkhon School, Thong Mongkon Sub-district; the 6<sup>th</sup> batch which commenced in 2017 comprising Bangsaphan Kindergarten, Kamnerd Nopphakhun Sub-district and Ban Wang Num Khiew School, Ronthong Sub-district and the 7<sup>th</sup> batch which commenced in 2018 comprising Women Secretary Association School 1, Ban Khaoman School, Ban Klongloy School and Ban Suanluang School.

All participating schools have passed the strict supervision, monitoring and evaluation pursuant to the criteria specified in the plan, as per decided by the central academic experts. Sahaviriya Funds have been periodically granted pursuant to the conditions of the project.

### Technician Potential Development for Steel Industries

The Company has collaborated with the Office of the Vocational Education Commission (VEC) and Bangsaphan Industrial and Community Education College under the "Technician Development for Steel Industries Project" for joint development and improvement of curricular at vocational certificate and high vocational certificate as well as development of potential of technical students to be in line with requirements of steel industrial groups and continual industrial groups. This project has been undertaken for 11 years and has about 639 technician graduates in 4 fields, i.e. industrial technical, industrial mechanical technical, electrical technical and warehouse management. Out of this number, 176 graduates are now working with Sahaviriya Group. In addition, this project becomes a model on formulation of dual vocational training (DVT) between the vocational education college which is a government sector and Sahaviriya Group, a private sector.



### SSI Group Annual Scholarships

In 2018, the Company and SSI Group provided 400 SSI Group Annual Scholarships, worth Baht 801,500 to local youth in 22 schools in Bangsaphan District who have determination to study but have economic difficulty, with details as follows:

- 249 general scholarships for primary school – high school students, Baht 275,000 worth,
- 10 continuous scholarships for bachelor's degree students, Baht 350,000 worth,
- 22 scholarships under "1 School 1 Arsa scholarship" program from SSI Arsa Working Group, Baht 23,000 worth.

Moreover, SSI staff also provided 119 additional scholarships, "Tun Nee Phue Nong", Baht 153,500 worth.



### Term Khwarm Fun Pun Khwarm Roo (SSI Fulfill dream and share knowledge) Project

SSI and SSI Group together with Bangsaphan Wittaya School arranged academic activities to enhance knowledge in five subjects (Science-Mathematics-English-Thai-Social Science) to prepare readiness of the students for General Attitude Test (GAT) and Professional and Academic Aptitude Test (PAT) before entering into the university. There were 1,848 students in Mattayom Suksa 6 from educational institutes in Bangsaphan District and nearby areas, such as Bangsaphan Wittaya School, Government Saving Bank School, Chai Kasem Wittaya School, Bangsaphan Noi Wittayakom School and Thong Chai Wittaya School participated in these activities.

### Local Curriculum Development Project

SSI has joined with the local schools and local people in setting up the Local Curriculum Development Committee to apply learning process which are in line with social context in the locality for sustainable development of quality of life and environment as well as to create actual participation through study courses taught by 11 SSI volunteer teachers who have keen expertise in this field. The topics which are taught to 445 students in Prathom 4 to 6, totally 30 hours in a year, are "Steel in daily life" and "Steel industry and community development".

Furthermore, in 2018, this project has expanded to include one more school, namely, Bangsaphan School, and teaching activities have been organised continuously in the participating schools, such as Ban Ao Yang School, Wat Ban Na Phak Khung School, Ban Chamuang School, Ban Don Sumran School and Ban Tha Kharm School. Currently there are 6 schools participating in this project which has been operated since 2012.

### The 13<sup>th</sup> To Be Engineer Project

SSI arranged the 13<sup>th</sup> To Be Engineer Project by inviting more than 207 students in Matthayom Suksa 5 from schools in Bangsaphan District to participate in the activities which included provision of knowledge on steel industry, hot rolled steel production process, environment management of SSI and recreational activities. The students also learnt about concept to further study in engineering in steel related field through actual experiences and knowledge guided by the SSI's qualified engineers, to stimulate them on choosing their education plan, so that they can work in and develop their locals in the future.







#### Sufficiency Economy School for Sustainability Project

SSI recognised the importance of idea of Sufficiency Economy of His Majesty King Bhumibol Adulyadej The Great (King Rama IX) and supported the social activities which emphasised on sustainable self-sufficiency, consequently, Sufficiency Economy School for Sustainability Project has been initiated since 1012 in Ban Nong Chan School, Ban Don Samran School, Wat Ban Na Phak Khung School, Bangsaphan Non-Formal and Informal Education (NFE), Ban Dong Mai Ngam School and Ban Tung Chueak School. The project still runs continuously to date.

In 2018, the project has expanded to include Ban Khaoman School located at Moo 11, Chai Kasem Sub-district, Bangsaphan District, Prachuap Khiri Khan Province. There were various operations for sustainability, such as a study visit at a model school; joint meeting with executives, educational personnel, school committees and village meetings to create understanding and involvement in the project, resulting in shared value between the Company, the schools and the communities through the schools' activities of sufficiency economy. About 145 students benefited from this project.

#### Young Agriculturist Project (Hydroponics) for School

This project has been built on Young Agriculturist on Hydroponics System Project which was launched in 2012 by SSI. At present, there are 6 schools in Bangsaphan District participated in the project, namely: Ban Tha Kham School, Ban Morasuab School, Ban Huaysai Khao School, Ban Suan Luang School, Ban Tongmongkol School and Ban Chamuang School. There were 1,744 students who received benefits from the project up to the present year. These students learnt and practiced business skills on production, management and marketing aspects. In addition, vegetables they planted were used as raw materials in School Lunch



Project and the rest were sold to their parents and the community to generate additional income for the participating students.

In 2018, SSI expanded the operating area of this project to Ban Klongloy School where there were 256 students benefited from the project. The Company also strictly monitored and supervised 6 participating schools, by focusing on efficient project management, enhancement of business skill for the participating students and emphasising on creating new generation of young agriculturist. Moreover, the older generation students were encouraged to teach younger generations to ensure that the projects will be continually taken care and on sustainable basis.

#### Village Youth Council Project

This Village Youth Council Project, which has been firstly initiated in 2012 at Ban Don Sa-nga with aims to encourage the youth to develop their own communities, cultivate public awareness and conservation of their own communities, promote alternative career and saving managed by the Youth Council's management.

In 2018, the Company has uplifted the Village Youth Council to be at sub-district level with support from the cooperation network members from the government organisations, such as Prachuap Khiri Khan Shelter for Children and Families, Department of Children and Youth and Kamnerd Noppakhun Sub-district Administration Organization. The Company has supported additional budget of Baht 50,000 to Kamnerd Noppakhun Children and Youth Council to perform activities as per its objectives, such as cleaning and improving landscape of school and Ban Na Phak Khung Temple during Loy Kratong Festival and other important days in the village in order to cultivate public volunteering spirit to 60 youth and villagers in Na Phuak Khwang Village, Kamnerd Noppakhun Sub-district.

### Career Development to Strengthen Household Economy

#### Community Bank Project

This project is the participatory development of quality of life on sustainable basis by jointly conducted with 19 villages in 4 sub-districts located surrounding the plant, by supporting and enhancing the communities to establish 18 community banks. As at 31 December 2018, total funds amounting to Baht 33,022,156, an increase from the amount of Baht 28,142,393 in 2017 and 3,625 project members could enjoy benefits, which has increased from 3,282 members in 2017. In addition, 9 community leader councils have been established to manage their own communities on participatory basis.

In order to make such project sustainable and on continual basis, in 2018, the Company has operated the works by focusing on increasing level and development of potentials by providing the following activities: (1) Arrangement of workshop on the "Computerized Deposit-withdrawal System"; (2) Study visits in order to elevate businesses of the community enterprise; (3) Arrangement of forum to develop potential of the community banks; and (4) Arrange forum on supervision, monitoring and evaluation of performance, creation of concept on business lifting plan and good governance of 18 banks.

#### Community Leader Council Project

The objective of this project is to encourage the community people to establish the community leader council to manage their own communities jointly with other associates networks, agencies of public sector, including SSI Group. In 2018, the activities arranged under this project were as follows: (1) Arrange workshop on "Advanced Public Speaking"; (2) Arrange 3 forums to monitor performance of the Community Leader Councils (roaming forum) in order to exchange idea and learn about operations of the Community Leader Council Committee; (3) The 3<sup>rd</sup> Model Community Leader Council Project for the year 2018 by inviting the qualified community leader councils to write a project to request for the supporting

budget of Baht 50,000 and the award was granted to Ban Tung Nun Community Leader Council, Moo 10, Pong Prasart Sub-district. (4) Leader Council Development Project by opening opportunity to 5 out of 9 community leader councils to write a project to request for a supporting budget from SSI Group. There were 3 community leader councils passed criteria by the committees, i.e. Ban Tang Sai, Moo 9, Ban Donsung, Moo 11 and Ban Fai Ta, Moo 4 of Thongchai Sub-district. Each council received a fund of Baht 30,000, totaling Baht 90,000. (5) The Community Leader Council Development Project, the 1<sup>st</sup> batch and the 2<sup>nd</sup> batch in order to create the learning center by jointly planning, meeting and monitoring performance of the 1<sup>st</sup> pilot community leader council, which is Ban Ma Rong, Moo 4, Pong Prasit Sub-district and the 2<sup>nd</sup> pilot community leader councils, which are Ban Fai Ta, Moo 1, Pong Prasart Sub-district, and Ban Tang Sai, Moo 9, Thong Chai Sub-district, totaling 3 villages. Work performed included development of learning bases within the villages, such as sign posts detailing learning bases, development and improvement of landscape and etc. in order to support the interested study visit groups. In 2018, about 71 study groups from inside and outside Prachuap Khiri Khan Province visited and studied about the projects from these 3 pilots community leader councils.

#### Sahaviriya Ruam Pattana Project and Participation on Associate Network Activities

The objectives of this project are to open opportunities to the agencies or the communities which have jointly participated in development activities with SSI Group to arrange exhibitions or display their works to disseminate to other participating agencies or communities including the third party to acknowledge their performance as well as to arrange the forum to exchange knowledge with each other. There were 28 exhibition booths with 308 people participated in this project.

#### Bangsaphan Community Enterprise Development Project

As SSI has strategic standpoint on sustainable development, promotion and development of local community economy on shared value basis between the business and the societies simultaneously, therefore SSI has invited 17 potential communities enterprises, totaling 51 people to participate in the "2018 Sahaviriya Ruam Pattana Project" in order to acknowledge policy and guideline on development and promotion of the community enterprise in the areas and promote marketing and business skills by arranging exhibition booths and selling products and goods of the community enterprise groups. In addition, SSI has developed 2 community enterprise groups to be its partners, such as Ban Don Sa-nga Marketing Demonstration Center Community Enterprise to sell rice for the employees' welfares and Ban Po Dang Community Enterprise to sell brooms made from coconut leaf stalk to be used at the plant.





### Increase Locals Hiring from the Community

In order to comply with the policy on promoting local workforce employment, so that the local people from Bangsaphan District and surrounding areas do not have to migrate to other provinces to work and search for income, as of 31 December 2018, SSI Bangsaphan Plant employed 3,315 employees of which 2,418 of them or 73.00% have domicile in Prachuap Khiri Khan Province. In addition, 343 outsourcing employees were also employed.

### Support Products and Services from Bangsaphan Communities

SSI supported local products manufacturing groups of the communities located in Bangsaphan District by purchasing local products and goods from various career groups in Bangsaphan District, with total value of approximately Baht 252 million and it is expected that in 2019, the purchase value will increase to Baht 280 million.

### Safeguarding and Upgrading the Environmental Quality

SSI puts strong emphasis on responsibility to the environment and natural resources. Apart from supervising the production process to ensure that pollutant emitted from the production processes will not have any negative impact to quality of life and health of the employees and the local people, the Company also collaborated with relevant agencies to arrange the environmental awareness promotions and campaigns continually. Up to present, there are 2,726 people participating in environmental conservation activities.

### SSI Beach Clean-Up

The executives and staff from SSI and SSI Group, together with Mae Ramphueng Sub-district Administration Organization, hotel and business entrepreneurs, students and people in

Bangsaphan District participated in “SSI Beach Clean-Up Project” for 10 consecutive years as a part of the World Environment Day, on the 5<sup>th</sup> of June of every year in order to participate in natural and environmental conservation campaign by jointly collect littering garbage on Mae Ramphueng Beach in Mae Ramphueng Sub-district, Bangsaphan District, Prachuap Khiri Khan Province covering areas of 3 kilometres. For this year, there were 995 people participated and about 2,290 kilograms of garbage could be collected. This year, main topic campaign of the United Nations Environment Programme (UNEP) is “Beat Plastic Pollution” with slogan of “If you can’t reuse it, refuse it” to encourage everybody to realize the value of beauty, importance of nature and environmental conservation and to protect this planet.

### Bangsaphan Car Free Day

SSI joined forces with SSI Group to arrange 2 bicycle ride trip projects on “Bangsaphan Car Free Day 2018” on 22 September 2018. This project has been arranged for 8<sup>th</sup> consecutive years with aim to raise awareness of global warming among people in Bangsaphan District, reduce energy usage and support bicycle



riding for good health. The 11-km bicycle ride trip attracted 358 people to cycle from Bangsaphan District Office to Bangsaphan Wittaya School. In addition, Bangsaphan people were asked to stop using motorised vehicles for 30 minutes from 8.00 - 8.30 AM. This activity helped reduce 1,496.44 kilograms of carbon dioxide equivalent (kgCO<sub>2e</sub>). Combined amount of carbon dioxide emission reduction resulted from this activity since 2011 to date totaled 20,394.92 kilograms of carbon dioxide equivalent (kgCO<sub>2e</sub>).

Moreover, SSI and SSI Group also arranged Ride for Smile Project, a project under Two Wheels Preserve Bangsaphan Project, to encourage people in Bangsaphan District to join bicycle trips for good health, reduce energy usage and create social contribution. In 2018, Ride for Smile Project has been held 3 times with total 248 participants and they could help reduce approximately 952.66 kilograms of carbon dioxide equivalent (kgCO<sub>2e</sub>).

### Cycling Trip to Plant Trees to His Majesty King Bhumibol Adulyadej The Great

SSI collaborated with local people in Bangsaphan District to arrange a “cycling trip to plant trees to His Majesty King Bhumibol Adulyadej The Great” to help increase green space and also raise awareness among local people to realise the importance of tree planting and energy reduction usage.

Seven cycling trips to plant trees have been arranged: Tham Kiriwong Temple in Thongchai Sub-district; Tung Kee Tai Mount in Phong Prasart Sub-district; Khaowong Cave in Kamnerd Noppakhun Sub-district; Tung Tub Tong Abbey in Ronthong Sub-district; Ban Chamaung’s public area in Phong Prasart Sub-district; Ban Nongtaja’s public area in Kamnerd Noppakhun Sub-district and Sufficiency Economic Center, Ban Fai Tha, Phong Prasart Sub-district.



### Youth Conservation Camp

SSI, in cooperation with the Prachuap Khiri Khan Primary Educational Service Area 1, organised the 13<sup>th</sup> Youth Conservation Camp with aims to instill green heart consciousness mind, to conserve natural resources and environment and to cultivate volunteer spirit through the established learning stations. This year, there were 128 students in Prathom Suksa 5 from 26 schools in the areas participated in this project which was held at Ban Tha Khan School. This project has been held for 13 times and has 1,155 youth conservationist networks, in total.







#### Love the King, Conserve Bangsaphan Project

SSI and SSI Group joined hands with the Mae Ramphueng Sub-District Administration Organization arranged the community development activities on auspicious occasion of the birthday of His Majesty King Maha Vajiralongkorn Phra Vajiraklaochaoyuhua on 28 July 2018 under “Love the King, Conserve Bangsaphan Project” by emphasising on community’s environmental development and making merit by following the ideas of His Majesty King Bhumibol Adulyadej The Great in conserving natural resources and environment. Activities performed including making campaign to raise awareness of Bangsaphan people in conservation of local environment, demonstrate unity and cooperation among the public organisation, Sahaviriya Group and Bangsaphan people in release 1,066,000 young aquatic animals to restore abundance of coastal resources, increase food sources and number of aquatic animals to increase income to the fishermen, plant 66 trees and collect garbage along the beach. There were 997 people participated in these activities which were held along the beach at Ban Don Sumran.

#### Cultural and Religious Promotion Activities

##### Activities on Elderly Day

SSI supported gifts and took part in 2018 Elderly Day Activities in Bangsaphan District, Mae Ramphueng Sub-district Administration Organization, Kamnerd Noppakhun Sub-district Administration Organization and Thong Mongkol Sub-district Administration Organization in order to preserve cultural traditions and express gratitude to the elderly. Activities performed were sprinkling water onto the Buddha images, pouring water onto the elderly’ hands including arranging recreation and exercise activities for the elderly.

##### 2018 National Children’s Day in Bangsaphan

SSI supported activities on National Children’s Day together with Mae Ramphueng Sub-district Administration Organization, Wat Ban Na Phak Khung School, Ban Tham Khao Noi School, Ban Donthong School and Bangsaphan Industrial and Community Education College (to provide to Bangsaphan School).

#### SSI Arsa Project

“SSI Arsa Project” is a volunteering project, that SSI staff and executives jointly participated in activities to help the society and community in Bangsaphan District.

##### Instilling Corporate Volunteering Culture

In 2018, SSI Arsa had arranged 20 volunteering activities under “25<sup>th</sup> Anniversary of SSI, 250 Virtues” Project (including 2 Sahaviriya Group Arsa for Bangsaphan Development projects).

##### 25<sup>th</sup> Anniversary of SSI, 250 Virtues: 20 Virtues

The 177 <sup>th</sup> Virtue:	Construct Song Pandin weirs, Ban Khaoman;
The 178 <sup>th</sup> Virtue:	Improve and repair boiling room of sterilisation equipment and lay cement floor around walkway in front of the building, Mae Ramphueng Health Promotion Hospital;
The 179 <sup>th</sup> Virtue:	Clean and renovate landscape around Don Yang Temple;
The 180 <sup>th</sup> Virtue:	Renovate and repair small children’s playground, Ban Thammarat School
The 181 <sup>st</sup> Virtue:	Renovate landscape and plant mangrove around Klong Pakpid Conservation Tourism Area;
The 182 <sup>nd</sup> Virtue:	Improve electrical system of monks’ eating hall, Tung Maprao Temple;
The 183 <sup>rd</sup> Virtue:	Paint Don Sumran School by SSI Group;
The 184 <sup>th</sup> Virtue:	Construct community buildings and shops, Klong Pakpid Conservation Tourism Area, Ban Fai Tha;
The 185 <sup>th</sup> Virtue:	Renovate landscape and clean areas around Pa Klang Ao Park;
The 186 <sup>th</sup> Virtue:	Repair cremation boat and paint funeral pavilion, Khao Talom Temple;
The 187 <sup>th</sup> Virtue:	Improve and repair village water supply pipe, Moo 2, Ban Na Phak Khwung;
The 188 <sup>th</sup> Virtue:	Renovate, repair and paint small children’s playground and equipment, Ban Rajprasong School;
The 189 <sup>th</sup> Virtue:	Construct hydroponics greenhouse, Ban Klong Lai School;
The 190 <sup>th</sup> Virtue:	Paint Takraw Sport Field;
The 191 <sup>st</sup> Virtue:	Paint fence of Small Children Development Center, Wang Numkhiew, Ron Thong Sub-district;
The 192 <sup>nd</sup> Virtue:	Paint fence and wall of Ban Hin Gong School;
The 193 <sup>rd</sup> Virtue:	Construct horse crab bank building, Ban Tong Thong Lang, Phong Prasart Sub-district;
The 194 <sup>th</sup> Virtue:	Paint and repair wall of Tung Tub Thong Monastery;
The 195 <sup>th</sup> Virtue:	Paint defensive wall of Khao Both Temple by Sahaviriya Group Arsa;
The 196 <sup>th</sup> Virtue:	Renovate landscape, Khao Thammarong Temple, Bangsaphan District.

The number of SSI Arsa Volunteers involved totaled 830 or 6,640 service hours, and the number of volunteers from the community totaled 952 or 7,616 service hours.



## SD Performance

### 1. Economic Performance Table

GRI	Required Data	Unit	2016	2017	2018	Remark
<b>Economics</b>						
G4-EC1	<b>Economic Performance</b>					
	Sales and Service Revenues	Million Baht	19,824.00	25,332.00	31,428.00	
	HRC Sales Volume (ktons)	Million Baht	1,232.00	1,285.00	1,441.00	
	EBITDA	Million Baht	2,203.00	6,115.00	1,665.00	Restate 2016
	Net Profit (loss)	Million Baht	(2,869.00)	4,535.00	194.00	
	<b>Economic Value Distributed</b>					
	Suppliers*	Million Baht	1,320.00	2,190.00	2,722.00	
	Employees**	Million Baht	658.12	712.21	737.00	
	Financial Institutions (Interest Expense)	Million Baht	2,607.13	1,015.08	898.00	
	Community, Society and Environment***	Million Baht	5.20	6.40	16.00	
	Government (Tax)****	Million Baht	110.98	89.01	91.00	

\* Consist of value of general trading transactions in goods

\*\* Consist of salary, wages, welfare, provident fund, social security and other expenses for HR development

\*\*\* Consist of expenses in community and environment development

\*\*\*\* Consist of corporate income tax, local maintenance tax, property tax, signboard tax and withholding tax

GRI	Required Data	Unit	2016	2017	2018	Remark
<b>Customer Satisfaction</b>						
G4-PR5	Target	%	75	75	75	
	Customer satisfaction					
	• Domestic market group A1	%	79	78	-	
	• Domestic market group A2	%	70	78	-	
	• Domestic market group A3	%	89	82	-	
	• Domestic market group B2	%	77	81	-	
	• Market S1 - Automotive group	%	-	-	80	In 2018, the company has a market survey to the satisfaction of the customer.
	• Market S2 - LPG Cylinders group	%	-	-	76	
	• Market S3 - Trader group	%	-	-	78	
	• Market S4 - Steel Pipe	%	-	-	82	
	• Market S5 - SSI Group	%	-	-	No survey	
	• Market S6 - HAEA Electric Appliance group	%	-	-	72	

### 2. Environment Performance Table

GRI	Required Data	Unit	2016	2017	2018	Remark
<b>Energy</b>						
G4-EN3	Total energy consumption	Megajoule (MJ)	2,457,873,035.26	2,956,830,885.09	3,361,963,337.91	
	Direct energy consumption	Megajoule (MJ)	1,785,019,175.26	2,274,012,747.59	2,588,534,193.39	
	• Benzene consumption	Litre	43,962,085.57	53,929,041.00	61,182,666.50	
	• Diesel consumption	Litre	559,965.00	638,601.00	810,886.00	
	• LPG consumption	Litre	345,003.33	489,032.19	664,568.03	
	Indirect energy consumption	Megajoule (MJ)	672,853,860.00	682,818,137.51	773,429,144.53	
	• Electricity consumption	Megawatt Hour (MWh)	186,903.85	189,671.70	214,841.43	
G4-EN6	Total amount of saved energy	Megajoule (MJ)	37,896,892.00	41,427,807.00	46,285,245.00	

GRI	Required Data	Unit	2016	2017	2018	Remark
<b>CO<sub>2</sub> Emission</b>						
G4-EN15	CO <sub>2</sub> Emission	Tons CO <sub>2</sub>	228,582.00	257,634.00	290,735.00	
<b>Water</b>						
G4-EN8	Water consumption from production process	Million Cubic Metres	0.98	0.99	1.18	
<b>Wastes</b>						
G4-EN2	Percentage of materials used that are recycled input materials	%	99.24	98.14	99.32	
G4-EN23	Percentage of waste by waste incineration	%	0.66	1.65	0.60	
	Percentage of waste by landfill	%	0.10	0.21	0.08	
<b>Transport</b>						
G4-EN30	Number of company's vehicles or leased vehicles for product transportation					
	• Short distance truck	Cars	57	59	60	
	• Long distance truck	Cars	838	674	812	
	Number of transportation					
	• Short distance truck	Trips	9,441	8,457	11,761	
	• Long distance truck	Trips	24,663	19,620	29,634	

### 3. Total Workforce Table

GRI	Required Data	Unit	2016	2017	2018	Remark
<b>Hiring</b>						
G4-LA1	<b>Number of employees</b>					
	• Number of permanent employees	Person(s)	1,151	1,154	1,140	
	• Number of contracted employees	Person(s)	324	146	160	
	<b>By gender</b>					
	• Male	Person(s)	934	929	917	
	• Female	Person(s)	217	225	223	
	<b>By age</b>					
	• Over 50 years old	Person(s)	88	96	132	
	• 30 - 50 years old	Person(s)	823	805	763	
	• Below 30 years old	Person(s)	240	253	245	
	<b>By employee structure</b>					
	• Executive	Person(s)	47	47	51	
	• Managerial	Person(s)	228	192	196	
	• Supervisory	Person(s)	435	457	449	
	• Operational	Person(s)	441	458	444	
	<b>Employee turnover</b>					
	Total turnover	Person(s)	93	65	60	
	Total turnover rate	% of Total Employee Turnover	8.08	5.63	5.26	
	<b>By gender</b>					
	• Male	Person(s)	60	46	44	
	• Female	Person(s)	33	19	16	
	<b>By age</b>					
	• Over 50 years old	Person(s)	5	4	2	
	• 30 - 50 years old	Person(s)	64	43	28	
	• Below 30 years old	Person(s)	24	18	30	



GRI	Required Data	Unit	2016	2017	2018	Remark
<b>Newly hired employees</b>						
	Total number of new employee	Person(s)	80	138	123	
	Total new employee rate	% of Total Employee	6.95	11.95	10.78	
<b>By gender</b>						
	• Male	Person(s)	55	88	88	
	• Female	Person(s)	25	50	35	
<b>By age</b>						
	• Over 50 years old	Person(s)	0	1	5	
	• 30 - 50 years old	Person(s)	16	66	38	
	• Below 30 years old	Person(s)	64	71	80	
<b>Maternity and Parental Leave</b>						
G4-LA3	Number of employee who take maternity leave	Person(s)	8	5	8	
	Number of employees returning to work after leave	Person(s)	8	5	8	
<b>Training and Education</b>						
G4-LA9	<b>Average training hour</b>					
<b>By branch</b>						
	• Bangkok office	Hours/ Person/Year	20.67	22.53	20.97	
	• SSI Bangsaphan Plant	Hours/ Person/Year	26.30	19.86	34.81	
<b>By employee structure</b>						
	• Managerial - Executive level	Hours/ Person/Year	19.05	28.89	51.98	
	• Operational - Supervisory level	Hours/ Person/Year	27.07	30.65	38.30	
<b>Anti-Corruption</b>						
G4-SO4	Number of employees who have completed ethics training	Person(s)	22	117	210	

GRI	Required Data	Unit	2016	2017	2018	Remark
<b>Code of Conduct</b>						
	Violation of Business Ethics	Cases	-	-	-	No violation
<b>Talent Attraction and Retention</b>						
	Percentage of employees who passed formal performance reviews	%	100.00	100.00	100.00	
<b>Employee satisfaction</b>						
	Goal	%	-	-	-	
	Percentage of employees who take engagement survey	Person(s)		819	839	
	• Bangkok Office	%	-	11	15	
	• SSI Bangsaphan Plant	%	-	89	85	
<b>Score</b>						
	• Total score of employee engagement with the Company	%	-	55.43	41.53	
	• Score of employee engagement with Bangkok Office	%	-	33.71	20.97	
	• Score of employee engagement with SSI Bangsaphan Plant	%	-	58.08	45.10	

#### 4. Occupational Health and Safety Performance Table

GRI	Required Data	Unit	2016	2017	2018	Remark
<b>Occupational Health and Safety</b>						
G4-LA6	<b>Injury Frequency Rate (IFR)</b>					
	• Employees and contractors	Case/a million working hours	1.38	2.64	1.67	
<b>Lost Time Injury Frequency Rate (LTIFR)</b>						
	• Employees and contractors	Case/a million working hours	0.35	0.66	0.31	

LTIFR: (Number of Lost Time Injury x 1,000,000) / Total Working Hours  
IFR: (Number of Injury x 1,000,000) / Total Working Hours



## Awards and Recognitions



### Thailand Energy Awards 2018 in the Category of Best Management for Energy Saving (Designated Factory)

Department of Alternative Energy Development and Efficiency, Ministry of Energy  
27 August 2018



### Certificate of Thailand Voluntary Emission Trading Scheme (Thailand T-VETS) in a Category of Steel Industry

Thai Greenhouse Gas Management Organization (Public Organization)  
19 September 2018



### The Best Organization by Environment Impact Assessment Standard 2018 (EIA Monitoring Award 2018)

Ministry of Natural Resources and Environment  
21 December 2018



## About This Report

### Scope of the Report

The 2018 SD Report of Sahaviriya Steel Industries Public Company Limited (SSI) is the 10<sup>th</sup> issue that the Company has published to inform shareholders, stakeholders, investors and the public. This issue has added information about stakeholder engagement and their expectation which will be applied to set up a clear SD framework with economic, social and environmental consideration.

This issue has covered all business strategy, policies, guideline, and business performance in economic, social and environmental aspect, mainly about SSI and some parts connected to its subsidiaries, during 1 January 2018 to 31 December 2018, to ensure that the SD guidelines are delivered consistently throughout the Group.

Moreover, SSI determines to expand the report to cover more areas in the future.

This report has been generated in accordance with Global Reporting Initiative (GRI) G4 which is an international initiative. The report is disseminated in written reports and online at [www.ssi-steel.com](http://www.ssi-steel.com) to allow everyone easy access to the information.

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## Stakeholder Engagement and Sustainability

SSI has channels for appealing against illegal action, including actions which will damage whistle-blowers and the Company. Moreover, the Company has policies to protect the whistle-blowers and the appeal will be monitored and the facts assessed. These issues will be fixed, while the whistle-blowers and the Audit Committee will be informed about its progress. In addition, the results of the Good Corporate Governance Committee's tasks will be reported to the Board of Directors for acknowledgement twice a year.

There are communication channels that the Company has applied to communicate with the main 7 groups of stakeholders to create understanding and allow them to be part of the operation. Their opinion will be assessed to appropriately respond to all stakeholders and continuously enhance for sustainable development.

Group of Stakeholder	Expectations	Engagement Method	No. of Time Engaged
Shareholders and Investors	<ul style="list-style-type: none"> <li>• Good corporate governance</li> <li>• Risk management</li> <li>• Good performance and return</li> <li>• Business Rehabilitation Plan Progress</li> <li>• Anti-corruption policy</li> </ul>	Annual general meeting	N/A
		Annual report	Annual
		Investor relations activities	As needed
		SET's website	Continuous
		Management Discussion and Analysis	Quarter
		SSI's website	Continuous
Customers	<ul style="list-style-type: none"> <li>• Product quality</li> <li>• Technical supports</li> <li>• On time delivery</li> <li>• Service quality</li> <li>• Appropriate access to product</li> <li>• Correct product information</li> <li>• Products that promote the society and environment</li> </ul>	Meeting	Continuous
		Development of good relationship via corporate tools; website, products manual, and activities	Continuous
		System of complaint	Continuous
		Plant visit	Continuous
		Website	Continuous
		Strategic Partner Meeting	Quarter
		Annual seminar	Continuous
Business Partners and Suppliers	<ul style="list-style-type: none"> <li>• Quality promotion</li> <li>• Technical support</li> <li>• Co-management of occupational health, safety and environment</li> </ul>	Meeting	Continuous
		Recruitment and selection process	Continuous
		Advisory system	Continuous
		Conference	Continuous
Competitors	<ul style="list-style-type: none"> <li>• Fair competition</li> <li>• Avoiding dishonest or inappropriate access confidential information of competitors</li> <li>• Not discrediting competitors</li> </ul>	Association membership	Continuous
		Association and sharing of experiences	Continuous
		Association membership	Continuous

Group of Stakeholder	Expectations	Engagement Method	No. of Time Engaged
Employees	<ul style="list-style-type: none"> <li>• Environment, health and safety management in workplace</li> <li>• Human resource development</li> <li>• Fair evaluation and appropriate remuneration</li> <li>• Communications</li> <li>• Equal employment opportunity and anti-discrimination in the workplace</li> <li>• Welfare</li> </ul>	Meeting	Continuous
		Internal program development	Continuous
		Employee relations activities	Continuous
		Workplace visit	Continuous
		Internal radio broadcasting	Continuous
		Intranet	Continuous
		E-mail	Continuous
		System of complaint	Continuous
Government	<ul style="list-style-type: none"> <li>• Job creation</li> <li>• Fair competition</li> <li>• Safety at work</li> <li>• Additional investment</li> <li>• National economic promotion</li> </ul>	Meeting and sharing information	Continuous
		Membership and participation in activities	As needed
		Meeting and providing information	As needed
		Community visit	Continuous
Communities	<ul style="list-style-type: none"> <li>• Community development</li> <li>• Environmental, occupational health and safety management</li> <li>• Additional investment</li> <li>• Knowledge transferring</li> <li>• Community activity support</li> <li>• Product transportation</li> </ul>	Monthly meeting	Continuous
		Opinion leader meeting	Continuous
		Activity support	Continuous
		Sponsorships	Continuous
		Communication activities	Continuous
		Opinion survey	As needed
		System of complaint	Continuous
		System of complaint	Continuous



## Sustainability Evaluation

SSI has conducted this report, by considering important issues which cover risk assessment, current and future business opportunities, in accordance with Global Reporting Initiative (GRI) and information from its stakeholders. This report was assessed according to GRI (G4) and was grouped in “Core” level, by revealing Material Aspect, which is shown in GRI G4 Content Index. Details of the assessment are as follows:

**1. Identification:** Identified significant sustainability related issues, by taking into account GRI indicators, industry standards, and market trends. The Company chose the issues influence business strategies, business risks and sustainability strategies of the Company, stakeholder expectations and creating shared values.

**2. Materiality Assessment:** Collected, assessed and introduced issues significant to business operations and in line with stakeholder’s interest regarding level of high and medium significance. Other issues are presented through communication channels i.e. Annual Report, 56-1 Report, website, etc.

**3. Issue Verification:** Interviewed external stakeholders and incorporate their perspectives and viewpoints during the content development. Corporate Social Responsibility Management Committee verifies assessment of significant issues to the organisation, selection of report content for publishing, as well as report formatting in order to ensure that the report covers significant issues relating to SSI and stakeholders’ expectations.

## Results of Significant Issue Assessment 2014 Table



## GRI Content Index

### General Standard Disclosures

● Fully Reported ● Partially Reported ○ Not Reported

GRI Aspect	Indicator	Level of Reporting	Page		Note
			SD Report	Annual Report	
Strategy and Analysis	G4-1	●	2 - 5	3 - 7	-
	G4-2	●	2 - 5	24 - 30	-
Organisational Profile	G4-3	●	8 - 9	13	-
	G4-4	●	-	15 - 18	-
	G4-5	●	-	29	-
	G4-6	●	-	-	-
	G4-7	●	8 - 9	12 - 13	-
	G4-8	●	7, 14 - 16	15 - 18	-
	G4-9	●	7, 57	8 - 9	-
	G4-10	●	39, 55 - 57	-	-
	G4-11	●	-	-	Not applicable
	G4-12	●	10 - 13	15 - 18	-
	G4-13	●	-	4 - 7, 10 - 11	-

GRI Aspect	Indicator	Level of Reporting	Page		Note
			SD Report	Annual Report	
	G4-14	●	2 - 5, 14 - 33	24 - 28	-
	G4-15	●	2 - 5, 32, 36, 43 - 51	10 - 11	-
	G4-16	●	37 - 38	-	<ul style="list-style-type: none"> <li>Private Sector Collective Action Coalition Against Corruption (CAC)</li> <li>The Association of Thai Hot Rolled Flat Steel (ATHF)</li> <li>The Association of Thai Cold Rolled Flat Steel (ATCF)</li> <li>Thailand Structural Steel Society (TSSS)</li> <li>South East Asia Iron &amp; Steel Institute (SEASI)</li> <li>The Federation of Thai Industries</li> <li>Thailand Business Council for Sustainable Development (TBCSD)</li> </ul>
Identified Material Aspects and Boundaries	G4-17	●	-	19	-
	G4-18	●	59 - 62	-	-
	G4-19	●	60 - 62	-	Results of Significant Issue Assessment 2018
	G4-20	●	59 - 62	-	The Aspect is material within the organisation, refer to "About This Report" and "Assessment of SSI's Key Sustainability Issues"
	G4-21	●	34, 59 - 62	-	page 34 "Result of Stakeholder Survey" and page 59 - 62 "About This Report"
	G4-22	●	-	-	-
	G4-23	●	2 - 5	4 - 7, 10 - 11	-
Stakeholder Engagement	G4-24	●	11 - 13, 60 - 61	-	Stakeholder Engagement
	G4-25	●	11 - 13, 60 - 61	-	Stakeholder Engagement
	G4-26	●	11 - 13, 60 - 61	-	Stakeholder Communication Process
	G4-27	●	34, 60 - 61	-	Stakeholder Communication Process

GRI Aspect	Indicator	Level of Reporting	Page		Note
			SD Report	Annual Report	
Report Profile	G4-28	●	59	-	-
	G4-29	●	59	-	-
	G4-30	●	59	-	-
	G4-31	●	59	-	-
	G4-32	●	52 - 57	-	-
	G4-33	●	62	139 - 140	Our financial data are audited by Independent Auditor.
Governance	G4-34	●	10 - 13	87 - 92	-
	G4-35	●	13	95 - 96	-
	G4-36	●	13	95 - 96	-
	G4-37	●	-	68	-
	G4-38	●	-	95 - 96	-
	G4-39	●	-	46 - 58	-
	G4-40	●	-	97 - 98	-
	G4-41	●	-	87 - 88	-
	G4-42	●	12 - 13	3 - 7, 72 - 88	-
	G4-43	●	-	92	-
	G4-44	●	12 - 13	91	-
	G4-45	●	-	24 - 28, 72 - 74	-
	G4-46	●	-	24 - 28, 72 - 74	-
	G4-47	●	12 - 13	70 - 85	-
	G4-48	●	62	-	-
	G4-49	●	12 - 13	70 - 71	-
	G4-50	●	-	-	In 2018, there was zero case.
	G4-51	●	-	64 - 67, 91	-
G4-52	●	-	64 - 67, 91	-	
G4-53	○	-	91	-	
G4-54	○	-	-	Not applicable	
G4-55	●	-	-	Not applicable: Proprietary information	
Ethics and Integrity	G4-56	●	1, 10 - 13	-	-
	G4-57	●	37 - 38	82 - 83	-
	G4-58	●	37 - 38	82 - 83	-

### Specific Standard Disclosures Overview

GRI Aspect	Location of Disclosure	Indicator	Level of Reporting	Page	
				SD Report	Annual Report
General	SSI	G4-Disclosures on Management Approach (DMA)	●	2 - 5, 10 - 13	-

### Economic

GRI Aspect	Location of Disclosure	Indicator	Level of Reporting	Page	
				SD Report	Annual Report
Economic Performance	SSI	G4-EC1	●	2 - 5, 14 - 16, 52 - 57	126 - 137
	Partner	G4-EC2	●	26 - 23	-
	Customer	G4-EC3	○	Not applicable	
	Community	G4-EC4	○	-	-
Market Presence	SSI	G4-EC5	○	-	-
		G4-EC6	○	-	-
Indirect Economic Impacts	SSI	G4-EC7	○	-	-
	Community	G4-EC8	●	2 - 5, 14 - 16, 52 - 57	-
Procurement Practices	SSI	G4-EC9	●	2 - 5, 48 - 52	-

### Environmental

GRI Aspect	Location of Disclosure	Indicator	Level of Reporting	Page			
				SD Report	Annual Report		
Materials	SSI	G4-EN1	●	20	-		
		G4-EN2	●	31, 54	-		
Energy	SSI	G4-EN3	●	22 - 24, 53	-		
		G4-EN4	○	Not applicable			
		G4-EN5	●	26 - 28	-		
		G4-EN6	●	22	-		
		G4-EN7	●	22	-		
Water	SSI	G4-EN8	●	22 - 24, 54	-		
		G4-EN9	●	22 - 24, 54	-		
		G4-EN10	●	22 - 24	-		
Biodiversity	SSI	G4-EN11	○	-	-		
	Community	G4-EN12	○	-	-		
		G4-EN13	●	25	-		
		G4-EN14	●	25	-		
Emission	SSI	G4-EN15	●	26 - 28, 54	-		
		G4-EN16	●	26 - 28, 54	-		
		G4-EN17	○	-	-		
		G4-EN18	●	26 - 30	-		
		G4-EN19	●	26 - 33	-		
		G4-EN20	○	-	-		
		G4-EN21	●	26 - 30	-		
		Influents and Waste	SSI	G4-EN22	●	22 - 24	-
				G4-EN23	●	31, 54	-
				G4-EN24	○	-	-
				G4-EN25	○	-	-
G4-EN26	○			-	-		
Product and Services	SSI	G4-EN27	●	19	-		
		G4-EN28	○	2 - 5, 35 - 36	4 - 7		
Compliance	SSI	G4-EN29	○	-	-		



GRI Aspect	Location of Disclosure	Indicator	Level of Reporting	Page	
				SD Report	Annual Report
Transport	SSI	G4-EN30	●	19, 54	-
Overall		G4-EN31	○	-	-
Supplier Environmental Assessment	SSI	G4-EN32	●	25	-
		G4-EN33	●	19	-
Environmental Grievance Mechanisms	SSI	G4-EN34	●	34, 60 - 61	-

## Social

GRI Aspect	Location of Disclosure	Indicator	Level of Reporting	Page	
				SD Report	Annual Report
Employment	SSI	G4-LA1	●	39 - 42, 55 - 57	-
		G4-LA2	●	41	-
		G4-LA3	●	56	-
Relations	SSI	G4-LA4	○	-	-
Occupational Health and Safety	SSI	G4-LA5	●	17 - 19	-
		G4-LA6	●	5 - 7, 18, 57	-
		G4-LA7	○	-	-
		G4-LA8	○	-	-
Training and Education	SSI	G4-LA9	●	17 - 19, 42, 56	-
		G4-LA10	●	-	-
		G4-LA11	●	57	-
Diversity and Equal Opportunity		G4-LA12	●	39, 55 - 57	-
Equal Remuneration for Women and Men	SSI	G4-LA13	○	-	-
<b>Labor Practices and Decent Work</b>					
Supplier Assessment for Labor Practices	SSI Supplier	G4-LA14	●	SSI found no illegal actions from performing supplier assessments, auditing and evaluation.	
		G4-LA15	○	-	-
Labor Practices Grievance Mechanisms	SSI	G4-LA16	●	SSI has received no significant complaints, affecting the business.	

GRI Aspect	Location of Disclosure	Indicator	Level of Reporting	Page	
				SD Report	Annual Report
<b>Human Rights</b>					
Investment	SSI	G4-HR1	○	-	-
		G4-HR2	●	40, 55	-
Non-discrimination	SSI	G4-HR3	○	-	-
Freedom of Association and Collective Bargaining	SSI	G4-HR4	●	10 - 13	-
Child Labor	SSI	G4-HR5	●	39, 55 - 57 No case of child labor in our operations.	
Forced or Compulsory Labor	SSI	G4-HR6	●	39, 55 - 57 No case of forced labor in our operations.	
Security Practices	SSI	G4-HR7	○	-	-
Indigenous Rights	SSI	G4-HR8	○	-	-
Assessment	SSI	G4-HR9	○	-	-
Supplier Human Rights Assessment	SSI Supplier	G4-HR10	●	SSI found no illegal actions from performing supplier assessment, auditing and evaluation.	
		G4-HR11	○	-	-
Human Rights Grievance Mechanisms	SSI	G4-HR12	○	-	-

## Society

GRI Aspect	Location of Disclosure	Indicator	Level of Reporting	Page	
				SD Report	Annual Report
Local Communities	SSI	G4-DMA	●	35	-
		G4-S01	●	5 - 7, 43 - 51	-
		G4-S02	○	5 - 7, 43 - 51	-
Anti-corruption	SSI	G4-S03	○	37 - 38	-
		G4-S04	●	37 - 38, 55	-
		G4-S05	○	37 - 38 In 2018, there was no corruption case.	
Public Policy	SSI	G4-S06	○	-	-
Anti-competitive Behavior	SSI	G4-S07	○	-	10 - 11
		G4-S08	○	-	-
Supplier Assessment for Impacts on Society	SSI	G4-S09	○	SSI found no illegal actions from performing supplier assessments, auditing and evaluation.	
		G4-S010	○	-	-
Grievance Mechanisms for Impacts on Society	SSI	G4-S011	○	-	-

## Product Responsibility

GRI Aspect	Location of Disclosure	Indicator	Level of Reporting	Page	
				SD Report	Annual Report
Customer Health and Safety	SSI	G4-PR1	○	-	-
		G4-PR2	○	-	-
Products and Service Labeling	SSI	G4-PR3	○	-	-
		G4-PR4	○	-	-
		G4-PR5	●	53	-
Marketing Communications	SSI	G4-PR6	○	-	-
		G4-PR7	○	-	-
Customer Privacy	SSI, Partner, Customer	G4-PR8	●	SSI strictly protects confidential information of customers (as promagated in the Business Ethics of the Company). In 2018, there was no substantiated complaint regrading breaches of customer privacy and losses of customer data, SD report page 11, 35.	
Compliance	SSI, Partner, Customer	G4-PR9	●	In 2018, there was no fines for non-compliance with laws and regulations concerning the provision and use of products and services.	