

2019 SUSTAINABILITY REPORT



THE FUTURE OF PLASTIC
PRODUCTS & PACKAGINGS
FOR CIRCULAR ECONOMY



SUSTAINABILITY REPORT 2019

RETHINK REDESIGN

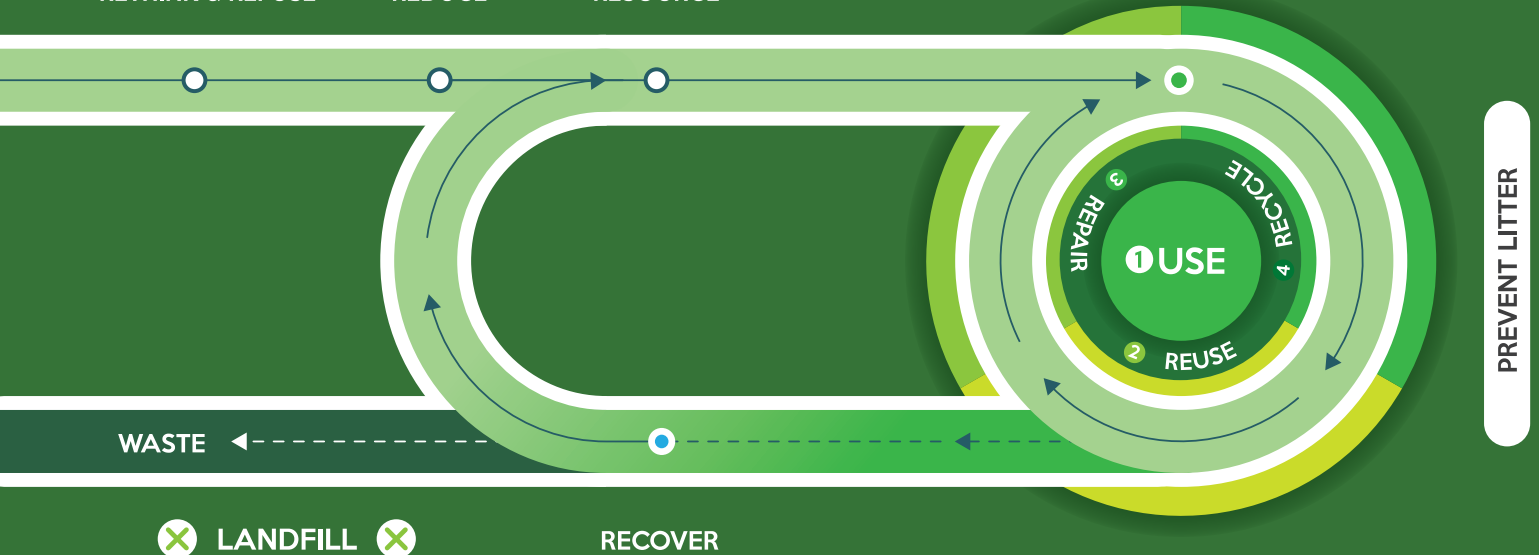
THE FUTURE OF PLASTIC PRODUCTS & PACKAGINGS FOR **CIRCULAR ECONOMY**

PREVENT WASTAGE

RETHINK & REFUSE

REDUCE

RESOURCE



6Rs

6Rs is re-thinking, re-designing, reduce material, re-process, re-energy and re-covering through product design. We attempt to reduce plastic usage in the production line but we still provide high-quality products for customers. Our product can reuse and recycle effectively.



contents

	Page
Chairman and Managing Director statement	2
Information of Thantawan Industry	4
Product innovation	10
Annual report 2019	14
Sustainable strategy of Thantawan	19
Thantawan and our stakeholder	24
● Stakeholder in business	24
● Materiality of Sustainability	26
Corporate governance	28
Sustainable business development	32
● Economy growth	32
● Supply chain management	35
● Environmental operations	36
● Social management	40
GRI Content Index	57
About this report	64





**A LEADING
INNOVATIVE
PACKAGING
SOLUTION
PROVIDER
WORLDWIDE**

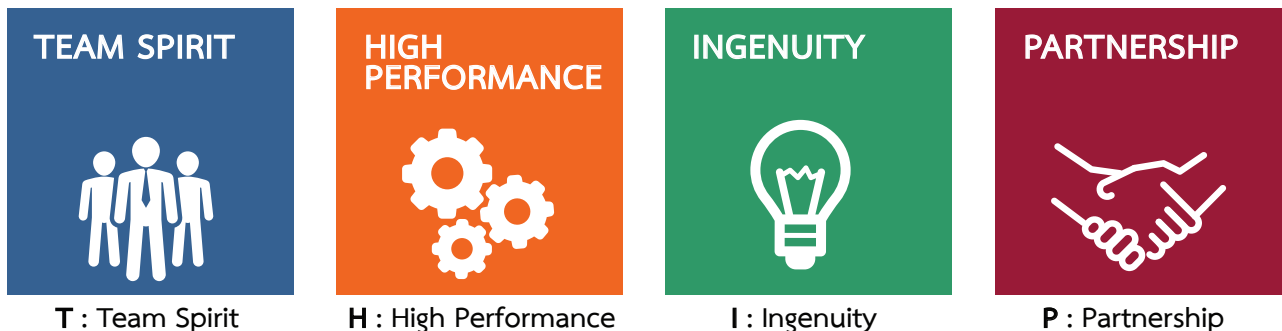
Vision

A LEADING
INNOVATIVE PACKAGING
SOLUTION PROVIDER WORLDWIDE

Mission

“We will utilize technological innovation and our experience in plastic packaging over design, research, manufacture and distribution. We significantly are a service provider creating more value for business partners and creating sustainable returns for stakeholders”

Values



The Company has determined the “**core value**” as a guideline for the management and staff in carrying out their works with an aim to see all members of this organization working together happily and sustainably through building up team spirit and unity, ideal organizational cultures, excellence in their field of operation, pride and loyalty.

To be determined to move forward to optimum performance which will result in achieving expected operation results and benefiting all stakeholders.

To promote morals and ethics and social accountability.

To promote good image and credibility for both inside and outside of the Company as well as among trading partners.



Message from...

Chairman of the Board of Directors

**We will regularly adhere
to the mission
to achieve and enhance
sustainability goals.**



Thantawan Industry Public Co., Ltd. (THIP) conducts business with the foundation of the sustainable organization in all aspects through the adjustment of business operations, research and product development delivering environmentally friendly products. The development of communication channels and distribution channels are modernized to meet customer needs properly in the era of rapid changes through technology. The innovation is highly emphasized in various terms including enhancement of sustainability in the organization, a consideration of responsibilities to all stakeholders, and an increment of employment within communities and environmental conservation.

Regarding “Circular Economy”, we have implemented the concept through design and development processes reducing the amount of plastic usage in the manufacture with high-quality products. End users, therefore, enable to reuse our products frequently through the recycling process. In the end, the products can still be converted into energy after they are no longer reuse.

In 2019, from our sustainability management, we granted “Thailand Sustainability Investment” awards from the Stock Exchange of Thailand (SET). This award indicates the commitment of sustainability management in terms of corporate governance, economy, society and environment. In addition, the award reflects the efforts of executives and employees at all levels of Thantawan Industry Public Co., Ltd., who have dedicated their reinforcement and spirit to co-develop sustainability within the organization.

Thantawan Industry Public Co., Ltd. will regularly adhere to the mission to achieve and enhance sustainability goals.

Mr. Praisun Wongsomith
Chairman

Thantawan Industry Public Co., Ltd.



Message from... Managing Director

Thantawan Industry Public Co., Ltd is one of the leading packaging manufacturers with full services in terms of design, research, production and distribution with "International standard". We also create "value" for business partners through technological innovation and our experience. It leads us to "The leader of international packaging" afterwards.

Amid competitive advantage in the business world, our company are conscious of the importance of all stakeholders because we believe that all of them can be a part of our achievement regarding business and operations. Then, our company is driven under business ethics with good corporate governance. The corporate strategy is also revised due to the global circumstance to meet the expectations of our stakeholders with sustainable management.

In 2019, the company has emphasized "100% natural plastic decomposition" in biological fermentation conditions. The new alternative is more environmentally conscious than "biodegradable plastic". Although this plastic is still degradation, the remaining micro-plastic residues in the environment and creatures. Therefore, one of the company's main goals is to develop knowledge and comprehend of "plastics", beginning with the plastic used with proper types. Then, considering whether the plastic can be used repeatedly (Reuse) or no longer use. If it is broken, it can be repaired (Repair). Lasting, some of them can be recycled or reused (Recycle), such as black enamelware. In case these products are unable to perform the procedure as aforementioned above, it contributes to alternative plastics or Bio Compostable.

According to the aforementioned knowledge above, we believe it will lead to the change of consumer behaviour for environmental conservation. Our company has devolved new product as recycling product under "Recycling products under the brand SUNBIN, which is 100% recyclable waste bags in folding and roll form. The bag has a sticky texture supporting heavyweight and no pungent smell. It is a new option for everyday use as well. Another product is under the brand SUN Eco Straw, including potable reuse tubes. It can be used with any size of glass and it is safe to use whether hot or cold beverages. Moreover, it comes with a tube brush and strap to serve the current lifestyle.

Thank you to all the staff for your dedication and effort to drive Thantawan into sustainable achievement and meet the needs of all stakeholders. The company is committed to continuous development to maintain leadership in packaging sustainably.



Mrs. Pojanard Prinyapatpakorn
Managing director
Thantawan Industry Public Co., Lt





Thantawan Industry Public Company Limited

Our company (Disclosure 102-1) : Thantawan Industry Public Co., Ltd.

Company name in stock exchange : THIP

Thantawan Industry Public Company Limited is one of the leading plastic bag and straw manufacturers with more than 40 years of experience leading us to the specialist in a production system and quality control with modern technology by following international standards

Our main products are different types of plastic straws, food packaging bag including a built-in zipper and zipper slider, multi-purpose bags in various industries, freezer bags, shopping bags, handle bags, garbage bags, and zipper lines for packaging. All goods can be produced either monolayer film or a multi-layer film. As aforementioned products can be made by bioplastics, compostable plastics as well as products with modern technology for raw materials, such as packaging to extend the shelf life of vegetables and fruits (Modify Atmosphere Packaging), Anti-microbial packaging, TEMP. Indicator Packaging, etc. (Disclosure 102-2)

■ Established in : 1978

■ Head Office (Disclosure 102-3) : 143 – 144 Moo.8 Soi Kangwal 2, Phetkasem Road, Omyai, Sampran, Nakornpathom 73160 Tel. 02-431-3051 , Fax 02-431-3056 -7

■ Head Office (Bangkok) : 123 Suntowers Building 32 A FL.,Vibhawadee Road, Chomphol, Chatujuk Bangkok, 10900 Tel. 02-273-8333 Fax. 02-273-8282 , 02-273-8484

■ Chief Executive : Mrs. Pojanard Prinyapatpakorn Chairman

■ A registered capital : 80,000,000.00 Baht

■ Employee (Disclosure 102-7) : 1,664 staff with 654 males and 1,010 female as of 31 December 2019

■ Business Type : Industry



Organization membership (Disclosure 102-13)



หอการค้าไทย และ
สภาหอการค้าแห่งประเทศไทย



สถาบันรหัสสากล



สมาคมส่งเสริมเทคโนโลยี
(ไทย-ญี่ปุ่น)



สมาคมอุตสาหกรรมพลาสติกไทย



สมาคมบริษัทจดทะเบียนไทย



The Stock Exchange of Thailand



สภาอุตสาหกรรมแห่งประเทศไทย
The Federation of Thai Industries



สมาคมส่งเสริมสถาบัน
กรรมการบริษัท



สภาผู้ส่งสินค้าทางเรือ
แห่งประเทศไทย



สมาคมผู้นำและผู้ส่งออก
ระดับมาตรฐานเออีโอ



สมาคมอุตสาหกรรม
พลาสติกชีวภาพไทย



สมาคมการจัดการธุรกิจ
แห่งประเทศไทย



สมาคมการจัดการงานบุคคล
แห่งประเทศไทย



สำนักงาน
นวัตกรรมแห่งชาติ (สนช.)



Company business

Thantawan Industry Public Company Limited is one of the leading plastic bag and straw manufacturers with more than 40 years of experience leading us to the specialist in a production system and quality control with modern technology by following international standards as following detail.



■ Straws

We are the first manufacturers of bendy straw in Thailand from high-quality PP (Polypropylene) with various raw materials such as straight tubes, tube bending, and coffee spoon tubes. These straws are both packaged in paper-wrapped or OPP wrapped making our products acceptable regarding a great quality, cleanliness, safe and hygienic. So bendy straws are widely used in restaurants, hotels, general hospitals.



■ Zipper bag

Being a pioneer in producing LDPE zipper bags in Thailand since 1978, we are specialized and able to produce a variety of high-quality LDPE (Low-Density Polyethylene) zipper bags whether it is an empty bag or printed bag.



■ Slider bag

With the advantage of being a manufacturer of zip line under the Zip Solution brand, we can provide a full range of customer services producing packaging with a zipper, either a single layer film (Mono Layer) or a multi-layer (Multi-Layer), which can be used in the food industry because every step of our production is controlled under the GMP standard with modern machinery.



■ Multi-purpose gloves and General Bags

We produce general bags from pure HDPE (High-Density Polyethylene) plastic which is free from fused pellets with special thickness and no hard smell. Therefore, it is suitable for use in hotels hospitals, homes and the general public. We also produce high-quality multi-purpose gloves that are thick, soft and meet standards. It is safe for cooking.



Company business



■ Stretch wrap

This product is suitably used in the kitchen. Its texture is clear, thick and sticky film with good quality and safety for cooking and health. It can be used to warm food or defrost in the microwave and also makes your cutting effortless with Slide Cutter without wasting film.



■ Zipper Profile

Through a long experience of being a manufacturer of zipper bags and the growth of the Flexible Packaging market, we have developed the Zipper Profile under the brand "Zip Solution" to meet the needs of the market. These zip lines are designed to provide more convenient and help keep the freshness of products packed in these packaging using our zip lines.



■ Scrubber

To meet the various customer needs, apart from the main products, we also offer Body Puff scrub with modern technology which is high quality fibers, soft, fine, export standard, clean, safe, made from 100% new plastic beads.



Our brands



SUN Products are offered several types for daily use



A group of consumer products suitable for household use



Zipper Profile



New innovation of fruit and vegetable bags



100% biodegradable natural products for environmental friendly



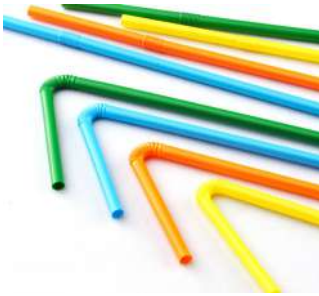
"100% recyclable garbage bag"



"Reusable portable tubes"



Production Capacity (Disclosure 102-4)



STRAWS
Average Annual Capacity
2,400 TON



ZIPPER BAGS
Average Annual Capacity
19,200 TON



SLIDER ZIPPER BAGS
Average Annual Capacity
720 TON



GENERAL BAGS
Average Annual Capacity
1,200 TON



CLING WRAP
Average Annual Capacity
170 TON



LAMINATE BAGS
Average Annual Capacity
180 TON



ZIPPER PROFILE
Average Annual Capacity
360 TON



BODY PUFF
Average Annual Capacity
310 TON



DRAWSTING BAGS
Average Annual Capacity
1,080 TON



COMPOSTABLE BIOPLASTICS
Average Annual Capacity
25 TON



Product innovation with environmental concern



Real Green is a group of Material Innovation distributed under the SUNBIO brand such as Compostable BIO PLASTIC. It is adapted to create a product which is 100% naturally decomposed within 180 days without leaving any residue in nature.



Compostable
Plastic Straws



Compostable
Shopping Bags



Compostable
Zipper Bags



Compostable
T-shirt Bags



Compostable
Garbage Bags



GO GREEN is a group of Design Innovation with 3R concept reducing raw material and waste, reusing and recycling. It is distributed under **SUNPRODUCTS** brand.



Product innovation with environmental concern



SUNBIN is a group of recycling products developing continuously into “100% recyclable garbage bag” in folding and rolling format with thickness and load well without smell. It is such a new alternatives for daily usage.



SUN Eco straw : The portable reuse tubes. It can be used with any size of glass and it is safe to use whether hot or cold beverages. Moreover, it comes with a tube brush and strap to serve the environmental friendly lifestyle.



Product innovation with environmental concern



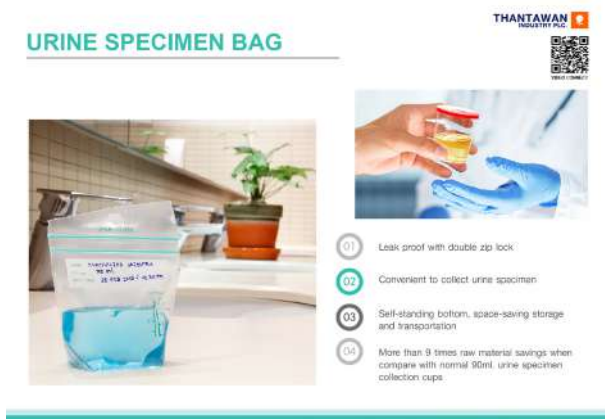
SUNMUM Premium Breast Milk Storage Bag

SUNMUM Premium Breast Milk Storage Bag are designed by the principle of TTI Packaging. The milk bags inform the right temperature for feeding. The perfect temperature will show the symbol of the bottle on the bag.



Re-usable microwave stream sterilizer bags

Re-usable microwave stream sterilizer bags is originated by our company for microwave sterilization taking about 3 minutes for use.



SUNMUM Premium Breast Milk Storage Bag

SUNMUM Premium Breast Milk Storage Bag are designed by the principle of TTI Packaging. The milk bags inform the right temperature for feeding. The perfect temperature will show the symbol of the bottle on the bag.



Glove box

Glove box will make you more convenient to wear gloves. Fast and convenient to wear hygienically.

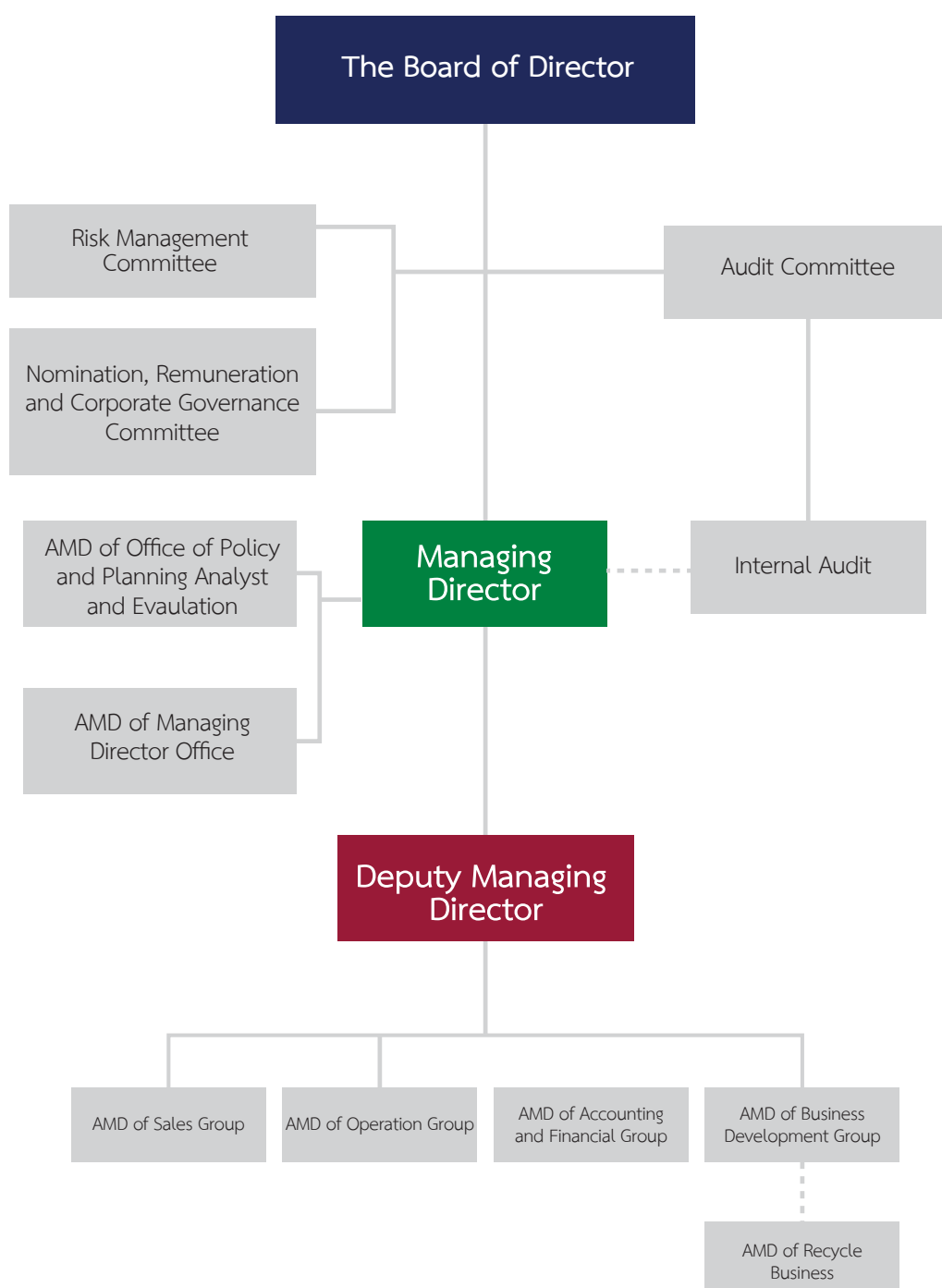


Management Structure

(Disclosure 102-18, 102-20, 102-22, 102-23)

The Management structure of Thantawan Industry Public Company Limited is comprised of :

- The Board of Director
- Sub-Committees has its duties in reviewing the important issues and complying with the stipulated charter which is appointed by the Board of Director in the total number of 3 committees, namely Audit Committee, Nomination, Remuneration and Corporate Governance Committee and Risk Management Committee.
- The Management with Managing Director is the highest executive of the Company.



Annual report 2019



Corporate Governance

- The member of CAC (Thailand's Private Sector Collective Action Coalition against Corruption)
- No Gift Policy for the 2nd consecutive year
- No corruption
- CG Score 5 stars for the 3rd consecutive year



Economic growth

- Total revenue 3,058.8 Million Baht
- Revenue proportion by product : Plastic bag 85% Straws 9% and others 6%
- Distribution ratio by country : Europe 59%, Thailand 15%, Australia and New Zealand 8%, Asia 9%, United states 11% and others 0.04%
- The ratio of domestic and exporting sales : Export 85% Domestic 15%
- Net profit 244.52 Million Baht
- Raw material procurement
 - 32 domestic suppliers
 - 16 international suppliers



Environmental Management

- Greenhouse gas emissions 13,738.1 tons of carbon dioxide
 - Direct GHG emissions Scope 1: 197.27 tons of carbon dioxide
 - Indirect energy usage Scope 2: 13,540.06 tons of carbon dioxide
 - Indirect emission Scope 3: 0.75 tons of carbon dioxide
- Annual electric energy consumption 19,529,880 FT
 - Average 1,627,140 FT/month
 - Decrease 2.34%
- The amount of tap water used is 44,688 cubic meters per year.
 - Approximate 3,724 cubic meters per month
- The amount of recycled water is 10,724 cubic meters per year, equivalent to 24%.
- Waste Management
 - Recycle 401,009.47 Kg by 78%
 - Fuel burn 112,247 Kg by 22%



Annual report 2019



Corporate Social Responsibility (CSR)

- Security
 - Lost workday cases (LWC) 8 times
 - Total Recordable Incident Rate is 19 times
- Customer
 - 90.17 % of Domestic customer satisfaction
 - 84.03% of International customer satisfaction
- Employee
 - Engagement Employee Score 74%
 - Training hours: Operational level 10.43 hours, supervisor level 28.01 hours, supervisor level 55.18 hours and executive level 63.18 hours.
 - Employment of the disabled 4 people, worth 690,000 baht per year. Reinforcement of the income-generating project for disabled people, worth 1,461,460 baht. With 13 projects



Awards and Achievements 2019

► “Visionary Board Award 2019”

by Thai Institute of Directors (IOD)



► "Thailand Sustainability Investment" 2019

by Stock Exchange of Thailand (SET)



► Corporate with environmental governance 2019 by the Ministry of Industry.



► “Outstanding Disability Employer Awards 2019”

by the Ministry of Social Development and Human Security



Awards and Achievements 2019

- Certification of AEO standards (Authorized Economic Operator) by Customs Department



- “Sustainability Disclosure Recognition 2019” By Securities and Exchange Commission and ThaiPat Institute



- “Thailand Green Design Awards 2019” By the Institute for Research and Development of Agricultural Products and Agro-Industry Kasetsart University



- Second runner-up award in "Crafting your own Business Plastic Design Contest - The first step towards professionalism" by PTT Global Chemical Public Company Limited





Sustainability Management

Thantawan Industry Public Co., Ltd embraces sustainability management in the corporate governance, economy, society and environment by analyzing the principles of risk management, both inside and outside factors, as part of the strategy for sustainable operations. Global sustainability trends and transformation are also utilized within the organization to meet the needs of all stakeholder groups.

The sustainability management structure is divided into 2 levels (Disclosure 102-19, 102-20, 102-22)



Principle level

- An organization's sustainability policy and a strategy for sustainable management is decided in this level (Disclosure 102-26)



Management Level

- A sustainability management committee and a working group on sustainability are established to achieve sustainability goals and strategies.

Sustainability principles and frameworks (Disclosure 102-16)

The company has established a framework for sustainability under the SDGs and stakeholder expectations.



Strategies, development goals and performance for a sustainable organization

Strategy and Development	Development issues	Goals	Outcomes
Dimension : Corporate governance Strategies : Establish transparency	<ul style="list-style-type: none"> • The great and justified corporate governance • Disclosure and report 	<ul style="list-style-type: none"> • Qualification the evaluation by IOD as a great and justified corporate governance • Disclosure 	<ul style="list-style-type: none"> • The great and justified corporate governance through the assessment of 90% IOD or 5 badges for the 3rd consecutive year. • Disclosure annual report and sustainability report
Dimension : economic Strategies : Business sustainability	<ul style="list-style-type: none"> • Increment of business growth • Generating revenue and poverty alleviation in the society • Innovative product development with environmental conservation and meet customer needs • Emphasizing product quality to international standards. 	<ul style="list-style-type: none"> • Sales and partnership • Local recruitment • Innovation results • Certification of the customer and international standards • Sales of innovative products 	<ul style="list-style-type: none"> • Total revenue at 3,058.80 Million Baht • Increase local recruitment by 85% • 2 innovative products • Certification of international standard • Innovative sales up
Dimension : environment	<ul style="list-style-type: none"> • Emphasizing the loss of electricity consumption 	<ul style="list-style-type: none"> • Decrease of electricity consumption 3% per year 	<ul style="list-style-type: none"> • Decrease of electricity consumption by 2.34% from the base year



Strategies, development goals and performance for a sustainable organization

Strategy and Development	Development Issues	Goals	Outcomes
Strategies : Environmental conservation	<ul style="list-style-type: none"> Developing operations to reduce energy consumption Clean energy consumption Reinforcement the employees to realize the value of energy Water consumption Improvement of water consumption process for maximum value Waste water treatment Greenhouse gas emissions and weather Air pollution monitoring and control system Noise and light pollution management Working environment management adhering specified standard waste management Dispose of properly adhering international standards or legal requirements 	<ul style="list-style-type: none"> Certified by an organization that has outstanding environmental performance Water reuse by 30% per year Water quality standard 100% waste water turn into the wastewater treatment system Greenhouse gas emission archives the criteria o the Greenhouse Gas Management Organization (Public organization) Air quality legally binding tandards The results of sound and light measurement have passed legally binding standards and regulations. The results of work environment management adhering international standards. The result of waste management and management guidelines Dispose of properly adhering international standards or legal requirements 	<ul style="list-style-type: none"> An award for outstanding energy conservation in over control factory plants from Thailand Energy Awards 2018 by Ministry of Energy (ISO 50001 : 2011) Water reuse rate 30% per year Water quality passed statutory standard. Wastewater was directed to treatment system 100% Volume of greenhouse gas emission 13,736.31 ton CO2 Air quality legally binding standards The results of sound and light measurement have passed legally binding standards and regulations. The results of work environment management adhering international standards. Recycle 401,009 kg Fuel burn 112,247 kg Dispose of properly adhering international standards or legal requirements



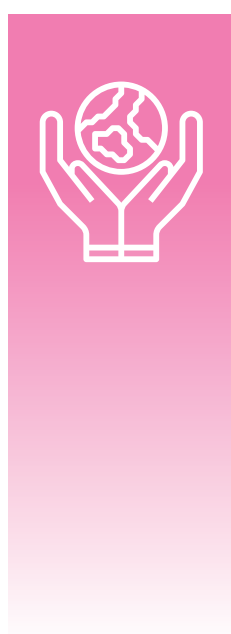
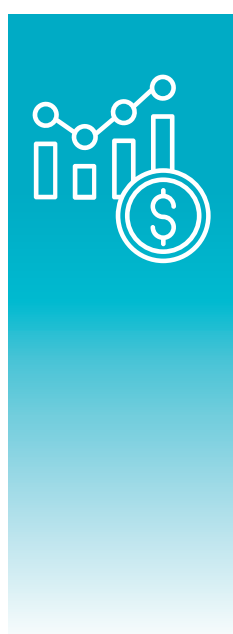
Strategies, development goals and performance for a sustainable organization

Strategy and Development	Development Issues	Goals	Outcomes
Dimension: Society Strategies: Human resource development	<ul style="list-style-type: none"> • Human right and fair employment • Knowledge and professional development • Employee awareness of data privacy • Employee stability • Employee engagement • A safety in workplace • Knowledge enhancement and reinforcement of safety awareness in workplace. 	<ul style="list-style-type: none"> • Treating employees equally, no discrimination, the right of expression, not employing child labor or compulsive labor. • Number of internal training courses and number of participants • Internal communication • Number of provident fund members • Number of savings cooperatives members • Employee engagement score • Returning rate of work after childbirth • Accident rate • Workplace safety training 	<ul style="list-style-type: none"> • Certified BSCI standard • 176 in-house training with 2,356 participants • Proceed through Morning Talk / Broadcast / Intranet and Comment Box / Talk To MD. • Monthly meeting • 378 members of provident fund • 504 members of savings cooperatives • Employee engagement score is 74% (Ref. Global Standard) • Staff return to work after childbirth 83% • 19 accident cases in 2019 decreased by 29 cases in 2018 • 7 Workplace safety training courses per year



Strategies, development goals and performance for a sustainable organization

Strategy and Development	Development Issues	Goals	Outcomes
<p>Dimension : Society</p> <p>Strategies : Community participation</p>	<ul style="list-style-type: none"> Involving internal and external organization's social contribution activities 	<ul style="list-style-type: none"> Number of employees participating in the activity The number of stakeholders Offering budgets for activities that enhance social life 	<ul style="list-style-type: none"> 736 employee attending the project 13,755 stakeholders Total Budget is 2,403,320 Baht



Stakeholder in business (Disclosure 102-43)

Thantawan Industry Public Co., Ltd has conducted a business strategy with all stakeholders as harmonizing with the global situation and trends. Performance based on needs and expectations of all parties in this report is the operation throughout 2019 that the company uses to classify the company's stakeholder groups into 7 groups (Disclosure 102-40) consisting of **employees, shareholders, customers, business partners and business competitors, government agencies and communities and societies.**

Stakeholder performance report

Stakeholder ⁽¹⁰²⁻⁴⁰⁾	Expectation ⁽¹⁰²⁻⁴⁴⁾	Company Response ⁽¹⁰²⁻⁴³⁾
Staffs	<ul style="list-style-type: none"> • Justice evaluation • Potential development • Compensation and welfare • Progressive stability 	<ul style="list-style-type: none"> • There is a 360 degree assessment for justice and comprehensive • There is a suitable training program for every positions • Formulate policies and procedures of the Human Resources department by following relevant laws. • Promote career advancement for employees in the organization and provide appropriate compensation and other benefits • Organize safety training as required by law
Shareholders	<ul style="list-style-type: none"> • Return on investment • Transparency and accountability • Creating growth and progress of the organization 	<ul style="list-style-type: none"> • Conduct a high turnover and pay dividends • Transparency and timely disclosure of company information • Establish a good corporate governance policy • Certified as a member of the Thai Institute of Directors Association to be a united front Anti-corruption in the private sector • A shareholder project visiting the business and getting feedback from minority shareholders.
Customers	<ul style="list-style-type: none"> • Quality of products • Reasonable price • Logistics enhancement • A strong practice of international standards and customer's requirements. 	<ul style="list-style-type: none"> • Verify the quality of the product to meet the specified standards • Review promotional campaigns and selling prices • Deliver products on time. • Be honest with the commitment to customers



Stakeholder in business (Disclosure 102-43)

Stakeholder performance report

Stakeholder ⁽¹⁰²⁻⁴⁰⁾	Expectation ⁽¹⁰²⁻⁴⁴⁾	Company Response ⁽¹⁰²⁻⁴³⁾
Partners	<ul style="list-style-type: none"> • Follow the contract and partner agreement. • Justice and equitable treatment to all partners • Adhere the honesty and transparency trade 	<ul style="list-style-type: none"> • Review business practices and business ethics of partners • Establish a fair procurement framework • Review and improve the procurement process.
Competitors	<ul style="list-style-type: none"> • Conduct business with transparency under good competition rules • Conduct business under free market competition 	<ul style="list-style-type: none"> • Provide marketing information that does not discredit competitors and conduct business under free market competition
Government agencies	<ul style="list-style-type: none"> • Complying with rules, regulations and laws • To cooperate in supporting government projects • Environmental conservation 	<ul style="list-style-type: none"> • Complying with laws, regulations related to business operations in accuracy and transparency. • Control environmental quality to meet the standards required by law.
Communities and Society	<ul style="list-style-type: none"> • Employment • Reduction of the impact on the community from operations • Educational development • Environmental development • Economic development 	<ul style="list-style-type: none"> • Hire local labor and promote the professional development within the community • Develop projects related to life enhancement • Listen to complaints from the community. • Organize community dialogue activities • Act as a responsible member of the community.



Materiality of Sustainability

Thantawan Industry Public Co., Ltd has identified a materiality of sustainability based on trends and global changes. Risk management and the Sustainable Development Goals of the United Nations are considered within our business plan to inform the business direction as well as the sustainability process to meet the expectations of all stakeholder groups. The company complies with GRI standards or GRI Sustainability Reporting Standards. (Disclosure 102-40)

Materiality criteria

1. Identification of all stakeholders

The company has compiled important information from both internal factors as goals and business plans of the organization and external factors as the direction of global change. The expectations of stakeholders are likely caused by the sustainability of the organization in terms of economy, society and environment. The reporting period covers January 1 - December 31, 2019.

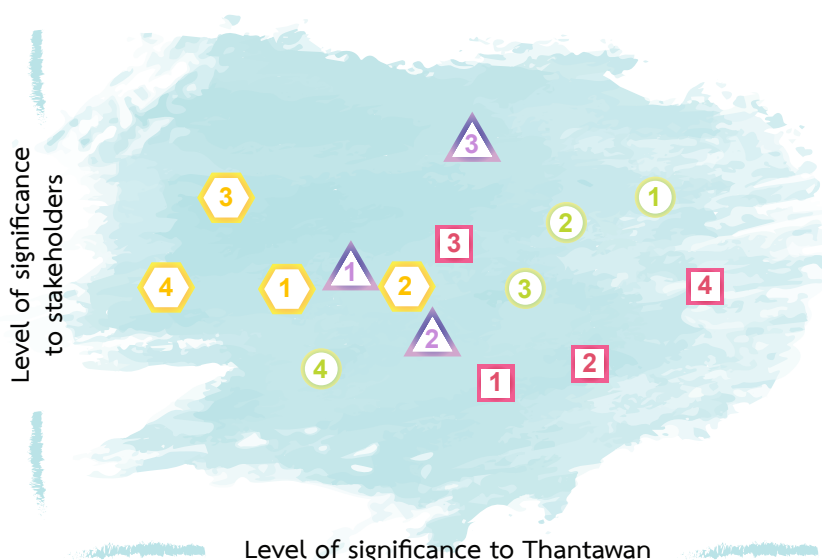
2. Prioritization

The company basically takes the key issues that are significant to the organization and to the stakeholders by comparing with the consistency of the keystone and indicators as the GRI standard. Then, the scores are given under the consideration of importance in 2 criteria in the Materiality Matrix table through details and important cores as following detail.

- **Horizontal dimension** : an important issue for the organization by considering the effect, opportunities, risks that may occur to the organization both in the short and long term.
- **Vertical dimension** : an important issue relating to stakeholders for making decisions by considering the level of impact and significant concerns which are plausibly occurred by a group of stakeholders

3. Validation

Keystone from the analysis has been approved by the corporate sustainability policy committee (Disclosure 102-32), especially customer issues and the global trend of sustainability in the plastics industry. It manifests sustainability issues in 2019 as follows



Materiality of Sustainability



The foundation of business management

Page

- | | |
|------------------------------------|----|
| 1. Business strategy | 20 |
| 2. Corporate governance | 28 |
| 3. Risk management | 30 |
| 4. Stakeholder participation | 24 |



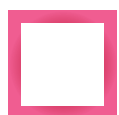
Economy

- | | |
|------------------------------------|----|
| 1. High turnover | 32 |
| 2. Supply chain management | 35 |
| 3. Innovation and Technology | 10 |



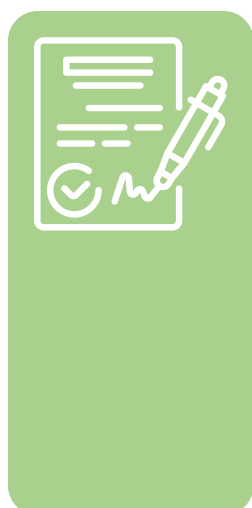
Society

- | | |
|---|----|
| 1. Human resource management | 49 |
| 2. Occupational health and safety | 51 |
| 3. Human rights | 50 |
| 4. Community participation | 40 |



Environment

- | | |
|-----------------------------|----|
| 1. Energy consumption | 36 |
| 2. Water consumption | 37 |
| 3. Climate changes | 37 |
| 4. Waste management | 38 |



Corporate Governance

The company is committed to creating credibility for investors and stakeholders in the business by rising the value of organization and encouraging the sustainable growth. Our business will be conducted under the principles of corporate governance which is the elemental value of leading organizations. The company, therefore, has established the corporate governance policy (Disclosure 102-16) as a framework for all operations.

1. The Board of Directors, executives and all employees will comply with the company's corporate governance manual by confidence and comprehension.

2. The Board of Directors, executives and all employees will apply the principles of corporate governance in practice for managing every level of business

3. The Board of Directors, executives and all employees will adhere to justice, treat all stakeholders equally and work for the benefit of the company with the best effort and transparency which can be inspected.

4. The Board of Directors, executives and all employees may suggest for enhance the corporate governance policy to be consistent and suitable for business standards and to meet international standard and customer needs.

Monitoring and implementation

It is the duty and responsibility of all directors, executives and employees that must be informed and comply with the policies and regulations contained in the corporate governance principles. In addition, executives at all levels must significantly encourage their subordinates to thoroughly comprehend policy and strictly adhere to the principles of corporate governance of Thantawan Industry Public Company Limited.

The company will not perform anything illegal or contrary to the principles of corporate governance. If the directors, executives or staff violate this principles, they will result in disciplinary action strictly. If an act is against the law, rules and regulations of the government, the company will send the matter to the government officials to proceed.

If employees at all levels of the company encounter difficulty in making decisions or operating a code of conduct which is not defined, please ask questions about such conduct to yourself as follows :

1. Is the action against the law or not?
2. Do your activities against the policy or ethics or the image of the company?
3. Do your actions have a serious negative impact on the company's stakeholders?

However, if employees are found violations of the law and / or the principles of corporate governance, they have to report complaints or allegations to the Chairman of the Board of Directors. The company will conduct an investigation without revealing the name of the whistleblower to protect the effects that may occur to the complainant or allegation which is in accordance with the whistleblowing or complaint policy of the company



Corruption Report



Corruption Report

Thantawan Industry Public Co., Ltd. has continued anti-corruption collective action. We have certified company as a coalition of Thailand's Private Sector Collective Action Coalition Against Corruption (CAC) since 2016 and we have been continuously certified this year.

There is a policy to support business operations with morality, ethics and anti-corruption principles in all forms and all stakeholders. A clear process and assignment of responsibilities are decided to ensure the accurate and transparent operations, including reporting clues and the mechanism to protect whistleblowers.

In this regard, the company has provided a channel for stakeholders submitting complaints or expressing their opinions directly to the Board of Directors via the following channels ;

1. Post office to the Board of Directors, Thantawan Industry Public Company Limited, No. 123 Sun Towers Building, Floor 32, Vibhavadi Rangsit Road, Chomphon Sub-district, Chatuchak District, Bangkok 10900
2. Electronic letter to the chairman at e-mail: board-thip@thantawan.com
3. Tel. 02-273-8333 ext. 3203

Risk management

Risk management is a significant process assisting systematically a business plan for uncertainty. Thantawan Industry Public Co., Ltd takes the framework of The Committee of Sponsoring Organizations of the Treadway Commission (COSO), which is an international standard, into the operational framework to allow relevant parties to understand the principles of risk management. The company will develop and apply this principle at all levels of the organization covering guidelines for policy formulation, operations and risk management

Organizational risk management structure

Director, executives and all departments in the organization are involved in risk management. A risk management committee consists of the Board of Directors and the Management Committee who are responsible for reviewing the risk management policy framework, risk management structure and establishing a group of risk management members to comply with the policy and provide recommendations on risk management that are consistent with the company direction, strategy, operation, and business plan. In addition, the committee will conduct, monitor and review risk management reports for all departments complying with the standards and the changes.



Enterprise risk management

Economic dimension

Topic	Effects	Management
The risk of sales from corporate customers	<ul style="list-style-type: none"> A monopoly is occurred since customers have a high bargaining power affecting our sales performance 	<ul style="list-style-type: none"> Sales increment of big potential customers Business extension to new customers and new markets Provide a variety of products
The risk of customer needs	<ul style="list-style-type: none"> Customers desire a variety of products and eco-friendly products 	<ul style="list-style-type: none"> Establish a working team on innovation and new product development Develop and researching Eco friendly plastic packaging Continuously develop new products
Risk from the fluctuation of raw material prices and higher production costs	<ul style="list-style-type: none"> Higher price will affect purchasing decision 	<ul style="list-style-type: none"> Establish a price evaluation team and the product development department to develop formulas of production. Have more alternatives of using plastic resin. Improve the machinery with higher efficiency and procurement

Social dimension

Topic	Effects	Management
Incidents	<ul style="list-style-type: none"> Affecting the safety of employees and the confidence of stakeholders. 	<ul style="list-style-type: none"> Establish a Business Continuity Plan (BCP) to carry out a supporting plan that will enable the business to handle a crisis or emergency Rehearse employee training plans in case of emergency situation KYT Morning Talk



Enterprise risk management

Environmental dimension

Topic	Effects	Management
Risk from disaster such as flood, fire	<ul style="list-style-type: none"> • The effect of business operations 	<ul style="list-style-type: none"> • Install a fire protection system meeting standards • Have a good flood prevention and drainage systems • BCP plan

Emerging Risk

Topic	Effects	Management
The risk of Single-use plastic	<ul style="list-style-type: none"> • Direct effect of product sales 	<ul style="list-style-type: none"> • Develop plastic products or other materials that are biodegradable material. • Focus on the concept of designing reusable products
The risk of technological change	<ul style="list-style-type: none"> • Affect the change of consumer purchasing behavior and affect the form and cost of business operations 	<ul style="list-style-type: none"> • Focus on creating new distribution channels and marketing communication channels for product with own brand covering through various platforms

Further information informed in Annual Report 2019



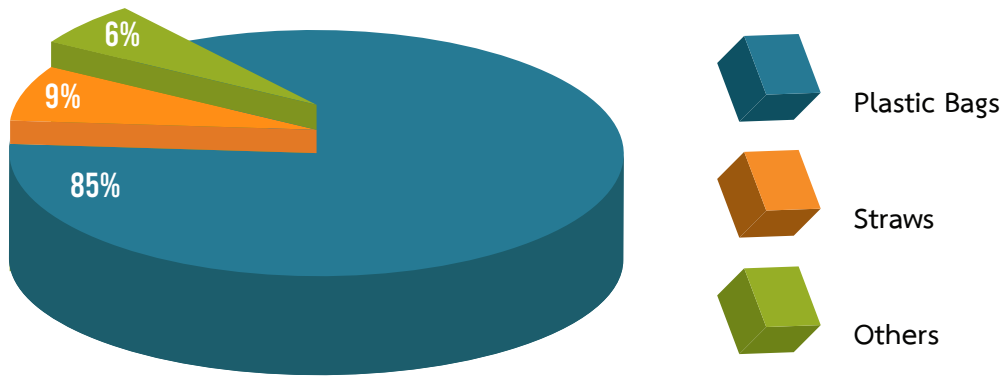
Economic Growth



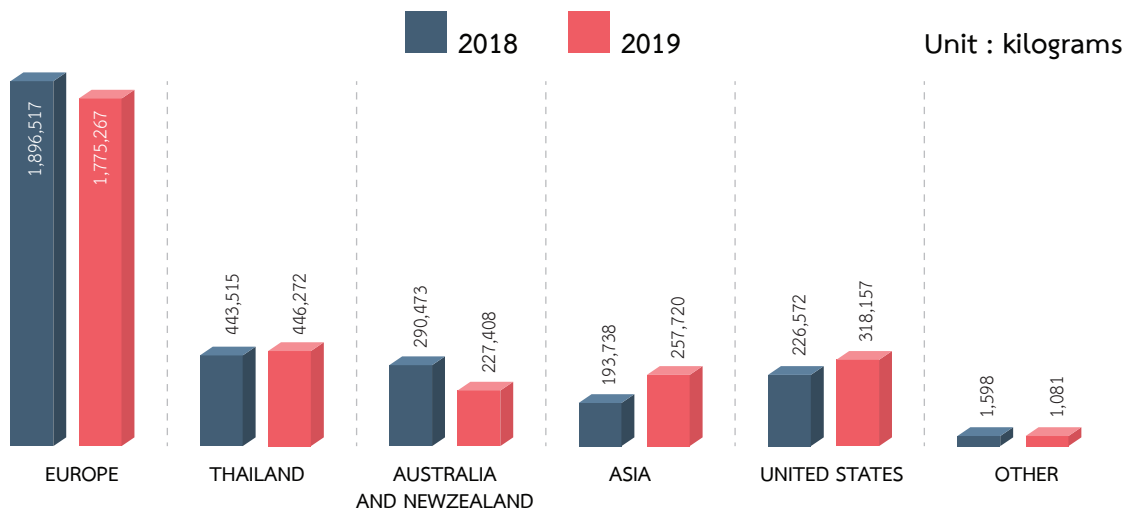
In 2019, Thantawan Industry Public Co., Ltd had total revenue of 3058.80 million baht and a net profit of 244.52 million baht. We are still able to maintain market share continuously. The majority income is exporting portion. The main revenue of products is plastic bag products. Thantawan Industry Public Co., Ltd. is continuously researching and developing Eco-friendly products to increase new distribution and revenue in the future.



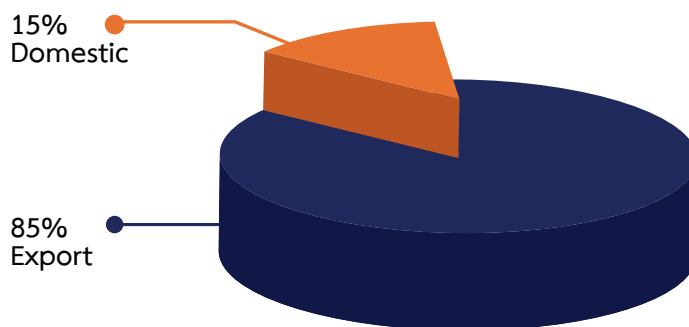
Revenue proportion by product



Revenue proportion by country



Revenue proportion by domestic and export



Currently, Thantawan Industry Public Co., Ltd offers various products to foreign market at 85% and domestic sales of 15%. The company has a plan to expand business in domestic markets to cover all consumer segments and meet customer needs properly. In terms of the growth rate, it tends to continue in a good direction continuously.



Product and Service market

Most of our products are made to order and distributed both domestic and international market. In which 85% of sales are in foreign markets. International distribution has focused on corporate customers in every continent such as countries in Asia, Europe, the United States, Australia and Africa. The products will be distributed with high-quality and diverse products to support future business growth.

— Target markets for selling products overseas divided into large groups as follows; —



■ Plastic bags importer under their own brands

This group of customers will import and sell plastic bags under their own brands and have a reputation by selling in stores or the mall in each country and they will promote products by themselves.



■ Plastic bag importer for large retailers

This group of customers will be an importer and distributor to the large retailers of each country.



■ Wholesales

Wholesaler or dealers will import products to distribute in foreign countries. The company has focused on creating a business relationship with this customer group in both trade and service for sustainability in business operations.



■ Domestic sales

The company is a direct distributor for buyers such as customers who are industrial sectors using plastic bags for wholesalers as well as distribution in large retail stores.



Supply chain management

The business operation will perform under stability and sustainability. Thantawan Industry Public Co.,Ltd has managed business partnership and operational management with partners which is the one of stakeholder in the company.

Partnership Management

THIP conducts business with justice adhering to THIP 's sustainability and stability notable. This action will inspire confidence among stakeholder at all level, especially business partners because THIP has a procurement with both local and nearby suppliers.

THIP strictly abides by the business ethics of trading partners and competitors. THIP will not discredit thereputation of competitors in the same industry. In the aspect of trading partners, transparent business operations in procurement are considered and also addressed human rights issues. THIP does not force unfair labor or child labor and not perform illegal violations related to business sustainability.

Consumer Responsibilities

THIP is committed to enhancing customer satisfaction and confidence in terms of receiving good products that meet customer needs at a reasonable price. The product information is disclosed, complete, accurate, and delivery on time. There is also a channel for customer complaints about products and services. THIP is responsible for maintaining THIP's customer history confidentially and the preparation of customer satisfaction assessments to improve and develop products and services.

Customer Satisfaction



- **90.17%** of Domestic customer satisfaction

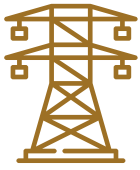


- **84.03%** of International customer satisfaction

THIP has evaluated customer satisfaction both domestic and international markets every year. This customer's voice is leveraged by creating proper strategies to meet their needs and satisfaction.



Environmental Operations



Power Consumption
19,529,880 FT



Water Consumption (tap water)
44,688 mm³



Greenhouse Gas Emission
13,736.31 Ton CO²



Water Reuse
10,725 mm³

In 2019, THIP foresees the importance of environmental management in parallel with business operations. THIP, therefore, focuses on research and development of Eco-friendly products by allowing consumers to participate in maintaining and reducing environmental impact both direct and indirect effect. Along with establishing environmental policies, a guideline for environmental operations are decided and a commitment to conduct business in conjunction with environmental stewardship is indicated.

According to the commitment of operation in parallel with an aforementioned environmental management, THIP is, therefore, continuously certified Green Industry Level 3 certification, Green System Level 3 : Green System, which is certified by the Department of Industrial Works. The certification implies an organization with systematic environmental management with monitoring, evaluation, review for continuous development as well as receiving recognized environmental awards and various environmental standards.

Energy consumption and Climate change

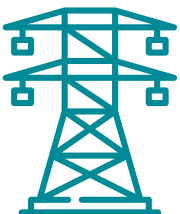
THIP has an energy management system certified by ISO 50001, which has been implemented continuously along with the determination of energy consumption as well as the establishment of a solar cell panel to reduce energy consumption.

As annual report in 2019, electric energy consumption **decreased at 2.34%**

Mission of Energy consumption

Reduction of electric energy consumption at 3% per year

Annual report 2019



Electric energy consumption
19,529,880 FT

Electric energy consumption per month
1,627,490 FT

2.34% Diminution of electric energy



Environmental Operations

Climate change

As the awareness of climate change and natural brunt causing damage of life, property and natural resources, THIP, therefore, has set guidelines to reduce greenhouse gas emissions appropriately from the production process and product transportation. The offices have to follow these guidelines as well to show the intention to control the global temperature which is not higher than 2 degrees Celsius.



Direct energy
consumption (scope 1)
197.29 tons of carbon dioxide

Indirect energy
consumption (scope 2)
13,540.06 tons of carbon dioxide

Water Consumption Management

The water scarcity, including water shortage, flooding and drought, in Thailand and worldwide is on going problems that THIP is always aware. Therefore, THIP has set a goal to reduce water consumption under water consumption with maximum value and benefits. Wastewater is treated to make it more valuable adequacy to be recycled.

Mission of water consumption

30% per year of Volume of water reuse
Annual report 2019



Water consumption
(Tap water)
44,688 mm³

Volume of water reuse
14,179 mm³ or 30 %

THIP uses 100% of tap water in the production process. In 2019, the average usage of tap water is 44,688 cubic meters per month and 3,724 cubic meters of recycled water is 14,179 cubic meters which is 30%.

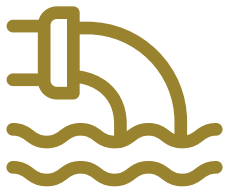


Environmental Operations

The wastewater system

THIP has used technology to treat wastewater with aerated AERATION ACTIVATED SLUDGE PROCESS; A/S is used to treat wastewater before returning the reuse water in various fields. It can support up to 95 cubic meters of wastewater per day and also provide an environmental monitoring/examination/measurement plan. With daily wastewater treatment system and with regular maintenance, the wastewater is checked twice a year. The wastewater sources within the company originate through the cooling water, toilets, washing, rinsing floors and cafeteria.

In 2019, there were 17,218.44 cubic meters of wastewater entering the wastewater treatment system which is 100% of the total wastewater amount.



The amount of waste water entering the treatment system 17,218.44 mm³

Waste management

Waste management is strictly performed with relevant laws. Thantawan Industry Public Co., Ltd. also uphold and focus on waste management following 3Rs consisting of reduce, reuse and recycle in order to reduce waste that needs to be disposed of and also decrease the environmental brunt.

In 2019, THIP implemented a waste separation project by campaigning to educate employees on waste separation with good cooperation. The campaign is a project that instils awareness of proper waste separation and waste disposal for employees.



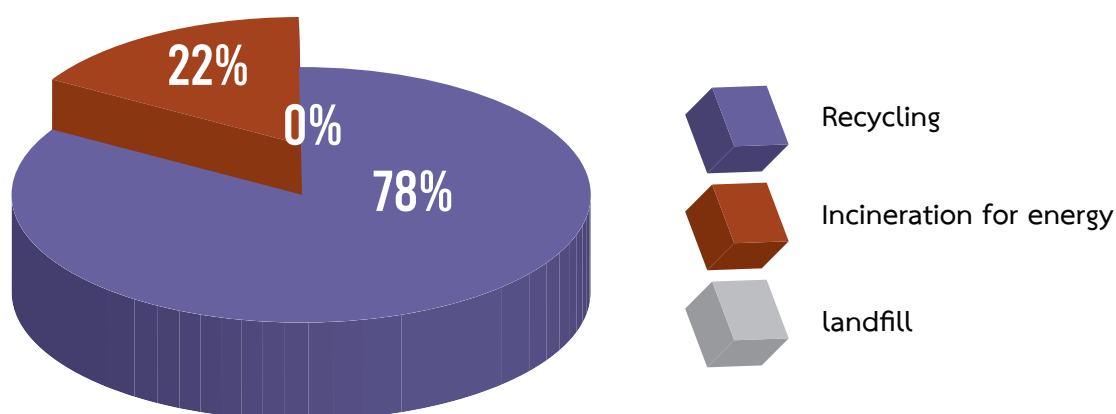
Environmental Operations

Mission

To comply with international standards and comply with the law.

Annual report 2019

Scraps Management



In 2019, there are 513,256.47 kilograms of waste and unused materials through 401,009 kilograms of recycled waste. Incineration for the energy of 112,247 kilograms and landfill of 0 kilograms.

According to waste management, THIP has operated complying with the law and regulation. THIP has been certified by ISO 14001: 2004 which is an environmental management standard with an emphasis on auditing, impact prevention, and environmental management in line with the nature of the business.

In addition to the above actions, THIP also hires service providers that comply with the relevant laws for each type of waste disposal. THIP also established a waste list categorized by type, such as general waste hazardous waste, non-hazardous waste, and waste for sale. These wastes are screened as a clear separation of colours for each type of waste and located in the specified points.

Environmental awareness for employees.

THIP regularly arranges various staff training regarding waste management, hazardous and non-hazardous waste separation to provide knowledge, comprehension and create consciousness. Employees are required to carry out garbage and throw away at the specified locations classified by type. This regulation is disposed of correctly as required by law.

THIP believe that environmental management both inside and outside the organization adhering to the objectives and goals of the company consisting of a determination of operational enhancement which least affect the surrounding environment. It will lead to sustainability in long run.



Social Engagement

THIP has a great consideration on creating a lasting engagement with communities. Throughout the years, THIP committed to continuing the sustainable development of the community along with the sustainability of the business.

Concept : “Sustainability Living the Future” or “Thantawan for sustainable live”

Strategy : Create awareness among employee regarding commonwealth, sharing, supporting both nearby communities and various communities for coexistence happiness and sustainability

Mission : Improving the quality of life among people in terms of creativity and sustainability.

Projects	Budget (baht)	Participants	Stakeholders	Value to beneficiary (individual : baht)
31	2,403,320	736	13,755	1 : 175

▼ THIP foresaw the opportunity to help the disabled directly and to create sustainability for the disabled through cooperation from the foundation of social Innovation in operations. It led to a career that can support themselves and their families and further improve the quality of life respectively. Mr. Channa Eamsang, the governor of Nakhon Pathom, and Mr Thammika Niyomsilp, the president of the Red Cross of Nakhon Pathom offered funds to support 13 disabled at the Nakhon Pathom City Hall.



Social Engagement

▼ THIP carried out social activities under the concept "Thantawan for sustainable lives" supporting the Children's Day activities in 2019 by joining with the government. Activities and various products are organized to be part of giving happiness, fun. The ability of children and youth were reinforced properly to create cultivate morality and ethics in accordance with the motto of the Children's Day of the Year 2019, "Children, Youth, Volunteering, National Development" by compiling the following activities

▼ Thantawan weight loss project was initiated by a health promotion working group as a representative of THIP participating in "9th Healthy Organization Meeting" workshop. The project contributed THIP to the network of healthy organizations. Our representatives received the certificate from Professor Dr. Wannee Nithiyanan, the chairman of the committee of the Thai without belly network, Health Learning Center Building, The Office of Health Promotion Fund in Bangkok. This project aims to encourage employees to change their behaviour for healthy and no disease. THIP expected to be one of concrete organizations supporting working-age health, which is organized by the network of The Royal College of Internal Medicine of Thailand under the royal patronage and the Office of the Health Promotion Fund.



Social Engagement

▶ THIP was a part of helping the Pukuk storm victims in Nakhon Si Thammarat by donating 400 kilograms of biodegradable bags to Khun Chamroen Thipha-phongthada through the governor of Nakhon Si-Thammarat province. Associate Professor Dr. Sarawut Paliphoch is a representative from Walailak University Pabuk Storm Victims Center of Walailak University to receive our assistance.



▶ THIP was a part of helping flood victims Ubon Ratchathani. As Mr. Komjate Pommongkolwat, Deputy Director of Marketing represented THIP to deliver 1,000 "SUNBIO" products, toilets, collection bags and garbage bags prepared in a special purpose, especially an excretion in an emergency or disaster, with 100% biodegradable. Worawan Tinsulanon, deputy manager of public relations and Arjuntharin Withun, the Thai TV Channel 3 newsreader, are recipients of our stuff at Maleenont Building, Tower 2, Rama IV Road in Bangkok.



▶ THIP product as "SUNBIO" had joined "Say Hi to Bio, Say No to Foam : Makro saves the world". Our domestic sales department brought SUNBIO products, Eco-friendly plastic products to the statement of announcing the intention to stop selling food foam containers in the project "Say Hi to Bio, Say No to Foam: Makro saves the world. You are invited to use Eco- friendly products ". This project was organized by Siam Makro Public Company Limited by an honour Ministry of Natural Resources and Environment at Makro, Thalang Branch, Phuket.



▶ THIP is aware of the current environmental problems from plastic waste in Thailand. The company contributes to the recycling plastic tube for stuffing in pillows. Waste plastic from the whole production process was turned into stuffing for bedridden patients as inevitable subsequent problems. Hence, the recycled plastic straws for stuffing has created waste innovations and inspired the change of behaviour with a great value for a green society in the future.



Social Engagement

▶ THIP has developed an innovation called 'Decomposed plastic bags' from tapioca starch by Thai crafts firstly launched at the 'Green Red Cross' in 2019 under a section of Plastic Red Bag for Organic Waste. As "Ready to show off the biodegradable plastic bags for organic waste from the lab to the extension for real use", THIP supported the blowing of plastic bags which produce decomposed plastic bags by 19,000 bags of organic waste used at the Red Cross, Lumpini Park held on 15-24 November 2019. In this first event, there are two sizes of bags including 18 inches wide for restaurants and 30 inches wide bag for more than 40 sorting points across the Red Cross. There is a volunteer team providing information and recommending the correct waste separation methods before Bangkok Metropolis will continue to manage waste in the waste factory as a one part of solving plastic waste.



▶ THIP delivers products "Biodegradable plastic bags for organic waste" is research from MTEC of NSTDA and SM Corporation Co., Ltd. developed bio-plastics formulation into plastics and mix formulas to increase the properties of engineer which is suitable for forming into thin films. The products co-operated with the plastic industry partners, including Total Corporations PLA (Thailand) Co., Ltd. and BASF (Thai) Co., Ltd. a sponsors of bioplastic raw materials.

THIP supported the blow molding process of plastic bags as "Joined the Red Cross for the year 2019 to be an environmentally friendly at Red Cross with the "Green Fair" concept, with Mr. Chatri Watthanakhachorn, Director of the Environment Office Bangkok who is the delegate at the Bureau of Drainage Bangkok, Mitmaitri Road, Din Daeng District.



Social Engagement

THIP joined the innovation of 100% biodegradable plastic bags to increase agricultural productivity with the BCG Economy policy. THIP attended "Ministry of Energy Development and the private sector driven related researches to the real circumstance adhering to BCG policy". "Biodegradable plastic bags for food waste" was demonstrated by using starch to produce plastic as a prototype for the development of the BCG Economy. This demonstration showed in the Red Cross at Lumpini Park. According to Bio Economy, a modern technology is chosen to increase the value or application and processing of products from agriculture to make traditional agricultural products having a higher economic value which is ready to conserve the environment. Meanwhile, this innovation addresses the needs of Thai SMEs and entrepreneurs who are directly affected by the environmental conservation trend. Mr. Suwit Mesinthe, Ministry of Higher Education, Science, Research and Innovation, Dr. Narong Sirilertworaku, Director of the National Science and Technology Development Agency by NSTDA, and public media visited the development process of bio-plastic production at SMS Corporation Limited, Pathum Thani.

There was a discussion on the topic "Opportunities and factors in creating Value from bio-based materials to join the BCG Model". THIP emphasized the importance of a circular economy and operated under the concept "Thantawan for every sustainable live" which aims to bring the remaining plastic from the production process to 100% utilization and initiation of the remaining products from the production process to further the business. THIP as an organization that conducts business in Thailand has cooperated with all partners to enhance our society in terms of plastic problems. Plastic is not the culprit. It is useful when we reuse it and managed appropriately.



Social Engagement



▲ THIP donated scholarships to Child Development Center, Om Yai Subdistrict Municipality (Om Yai Temple) and Municipal School 2, Om Yai Temple (Nakorn Rat Witthayakhan) as a part of supporting education for children and youth which will be an important force for the nation.



▲ THIP brought our products donating to the National Children's Day Activity 2019 at the Pho Kaew Provincial Police Station, Nakhon Pathom.

▶ As annual Buddhist lent candle procession 2019, Mr. Dararat Pui Chaiyaphum, Assistant Human Resource Manager, was representative of THIP with employees had joined this procession organized by Om Yai Sub-district Municipality. The candles were offered to temples in the municipality including Sirindhorn Thep Rattanaram Temple, Thien Perm Temple, Om Yai Temple and Khlong Om Yai Temple. Mr. Tossapon Rodruttanatol, Mayor of Om Yai district, presided over the ceremony, which THIP hopes to be a part in continuing the good traditions of the Buddhists such activities at Sam Phran District, Nakhon Pathom Province.



Social Engagement

▼ "Born To Be Good" project is about inviting friends to do good activities on their birthday. A project was established for THIP employees through various activities in each month such as making merit, community service and community development around the factory.

▼ THIP donated scholarships to Child Development Center, Om Yai Subdistrict Municipality (Om Yai Temple) and Municipal School 2, Om Yai Temple (Nakorn Rat Witthayakhan) as a part of supporting education for children and youth which will be an important force for the nation.



▼ THIP supported innoBioPlast 2019: Circular Economy Opportunities for Bioplastics. Narueesai Mahathitirat, Assistant Managing Director of Policy Analysis Planning and Evaluation Office, was a company representative taken a picture with the Board of Directors of the Bio-Plastic Industry Association (TBIA) as an supporter of innoBioPlast 2019, which in organized a talk by Dej Badin Roongsapdee (Deputy Managing Director) who participated in the discussion on Bioplastics Applications in Thailand / Trends / Research and Development. THIP showed the product booths exhibition under SUNBIO group by anticipating to be a part of education and promoting the use of 100% natural biodegradable plastic products for society.



Social Engagement

- ▶ THIP had joined the "100,000 Volunteer Hours Doing Good, Doing Together" project of Kasikornbank with the volunteer group called I SEE U. The campaign organized 200 kilograms of activities at the Phra Pradaeng Protection and Development Center (approximately 200,000 lines).
- ▶ THIP supported the project "EGAT People Do Good Year 7 of the Electricity Generating Authority of Thailand". The volunteer group called I SEE U organized activities at the Electricity Generating Authority of Thailand, amount 50 kilograms (about 50,000 lines)



Project	Institute	The amount of light reinforcement (Bulbs)
100,000 Volunteer Hours Doing Good, Doing Together	Kasikorn bank	200,000
EGAT People Do Good Year 7 of the Electricity Generating Authority of Thailand	Electricity Generating Authority of Thailand (EGAT)	50,000
The amount of light reinforcement (Bulbs)		Value (Baht)
250,000		18,750



Social Engagement

▼ THIP for sustainable lives attended blood donation 2019 for Red Cross at Nakhon Pathom to assist patients. The participants includes THIP executives and employee. This activities is organized annually in order to increase a chance of community assistance and sustainability lives.



▼ THIP coordinated with Sing Estate to join Let's Go Green Project, Save The Earth. We became a member of a campaign to reduce waste named the Vibhavadi No Waste Project under this former project in collaboration with over than 20 companies including Sun Tower's tenant partners and nearby companies. As plastic waste problems, it is caused by a lack of knowledge, a lack of discipline and post-use management. We took this opportunity to create awareness of the different types of plastic bags, especially 100% naturally biodegradable plastic, which is a new alternative. Once it is buried, it can be decomposed to 100% fertilizer. This project is along to create knowledge and comprehension of plastics to the public as part of supporting environmental conservation.



Social Engagement

▶ “THIP SPORT DAY” encourage healthy trend among employees

Aorweena Maneesangsakorn (The president of health promotion and operation) launched a health promotion program under the concept "THIP SPORT DAY", the day of the exercise and providing sports equipment to employees such as badminton, futsal, small football, takraw, table tennis, aerobics. THIP want employees use these equipment for an exercise on their free time under the objective of strengthening the health of employees both physically and mentally. Additional objective is to build good relationships between employees through playing sports together. In this regard, the first mini-marathon was organized around the Tantawan Industrial Factory by Mr. Dej Badin Reinsapdee. (Managing Director) presided over the ceremony. There are more than 100 employees in the activity. THIP will promote health promotion activities for employees continuously because a strong physical health will naturally benefit one's self to family, lifestyle and finally extended to the corporate level and society. The activity was held at the Om Yai Tantawan Industrial Factory, Nakhon Pathom.



▶ THIP applauded employees for their good effort. Dejbadin Reinsapdee, Deputy Managing Director, and Praew Rayasathan, Director of Production, gave a certificate of best effort to employees who prevent and stop the fires from neighbouring factories. This appreciation is worthy of praise regarding a good role model for others at the Tantawan Industrial Plant, Omyai, Nakhon Pathom.



▶ THIP for sustainably lives project was organized due to World No-Tobacco Day on 31 May annually to reduce and stop smoking consumption among employees. This activity was conducted by Human Resource Department including the exhibition of cigarette hazard and the campaign of stop smoking consumption. Employees participating in activities received rewards at the cafeteria of Thantawan Industry Factory, Nakhon Pathom. However, smokers can request a consultation to stop smoking at Public health center and all hospitals in Bangkok or request advice at National smoking cessation center by phone, Tel. 1600 (available 24 hour)



Social Engagement

▼ Working group of health promotion increased a concentration for healthy employees with happiness

Orawena Maneesangsakorn, Assistant Director of Production Group 1, Chairman of the Health Promotion Working Group and the health promotion operation working group were hospitality the Environmental Quality Development Association under the project of a healthy development in workplace supported by the Office of the Health Promotion Fund. The organization tutored the working team regarding process operations in the workplace for implementation of that knowledge on activities driving employee health. The goal is to enhance employee's health and happiness. THIP believes that good health leads to work efficiency, good family and sustainable society.



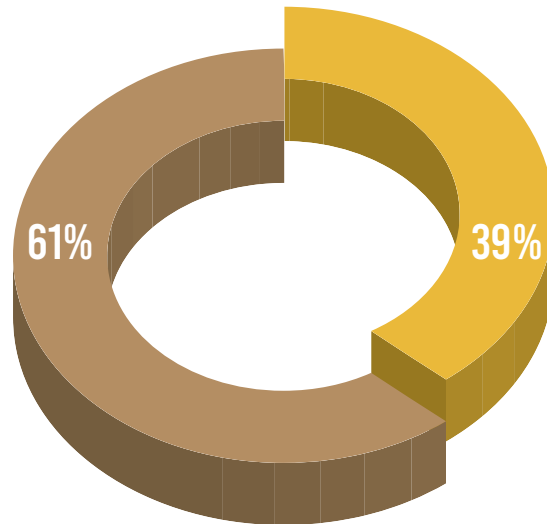
No.	Date	Participants	The amount of blood donation (CC)
1	15 February 2019	115	30,450
2	17 May 2019	89	26,950
3	23 August 2019	84	25,200
4	22 November 2019	120	30,800
Total participants (person)		The amount of blood donation (CC)	
480		113,400	



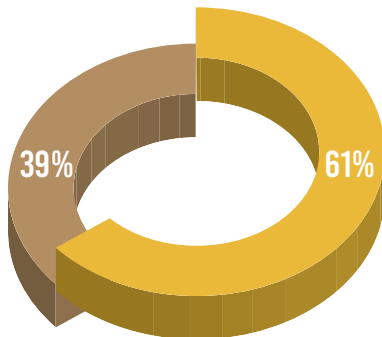
Employee Information


At present, Thantawan Industry Public Company Limited employs 1,654 people, with a significant staff statistics as follows :

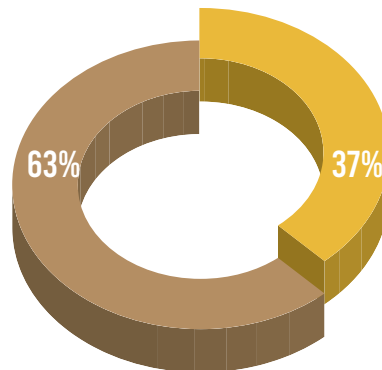
Total staff  Males  Females



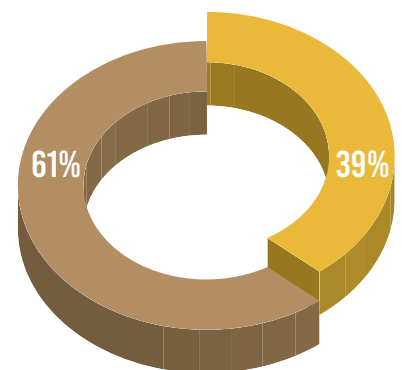
The proportion of total staff



 The proportion of executives



 The proportion of operational staffs



 The proportion of staffs

Employee turnover rate



Permanent staffs

1.44%

Temporary staffs (daily)

5.63%



Employee Information

Maternity leave rate and back to work



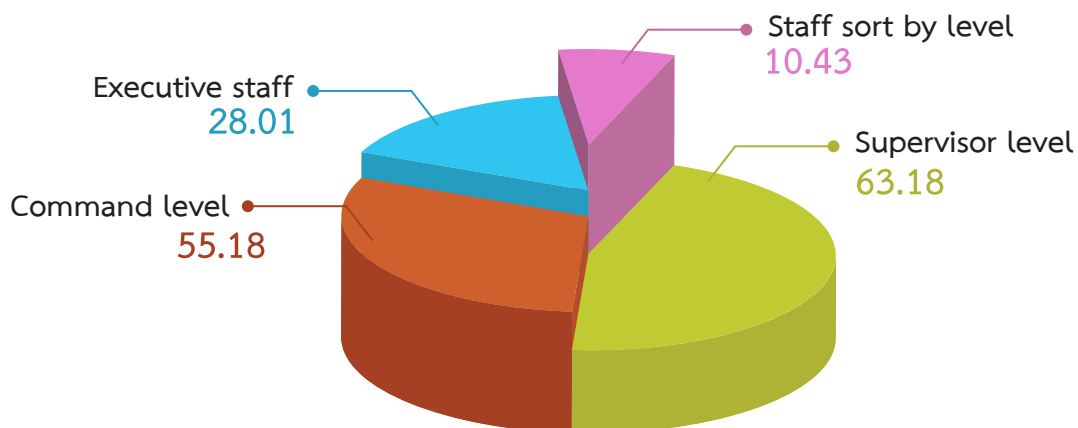
According to the 2019 employee report, there are 39% male employees and 61% female.

In employment, THIP has a policy to recruit people from local communities around the factory as well as THIP supports various activities that enhance the quality of life for people in the community, which is considered as the distribution of income to the public. It enhances strengthen relationships and acceptance from communities.

Development of control staff and organizational development

THIP believes that our employees are valuable for the organization and the key to success. Therefore, THIP has determined to continuously develop the potential employees, retaining knowledgeable and capable staff in the organization by treating all employees equally on the basis of human rights and labor rights.

Training hours (Hour : Person : Year)



Training and development of company personnel is not provided only the theoretical training but real -world operational skills are also provided for employees to have complete skills and potential to work more efficiently.

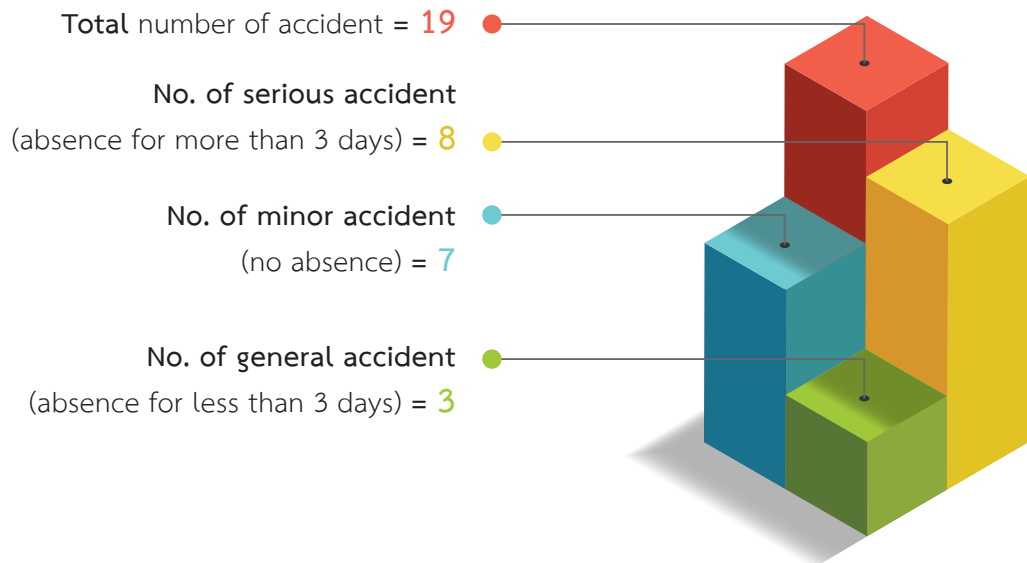
Employee engagement

THIP conducts an internal survey getting the feedback for the process enhancement of employee engagement. The organization's engagement score is 74% in 2019



Safety and Occupational Health

Statistics of Accident



Safety is a primary concern of THIP's business operations and the main indicator for measuring the success of an organization affecting the reputation and image of the organization significantly. THIP is, therefore, committed to operating in strict accordance with safety and security policies.

The guideline of occupational health and safety



Mission: Zero accident

Safety and occupational health is a priority concern for THIP and stakeholders, including employees, contractors and the community. THIP has a policy on safety and occupational health requiring employees and contractors to have safety duties and responsibilities for themselves and their colleagues through occupational health and safety management structure and standards for occupational health and safety management systems as well as promoting continuous training on safety in the organization. In 2019, there were 7 safety training courses organized.



Safety and Occupational Health

Safety performance

In terms of the security performance that reflects the efficiency and determination, THIP has collected statistical data through the fatal injury rate index of employees from accidents. According to the statistical data collected in 2019, it found that the severity of injuries of employees is equal to 8 times and no deaths of employees.

Occupational health and safety activities

▼ **Safety Morning Talk** was arranged to inform news and monthly safety activities to all employees and to carry out KYT activities to raise awareness in workplace

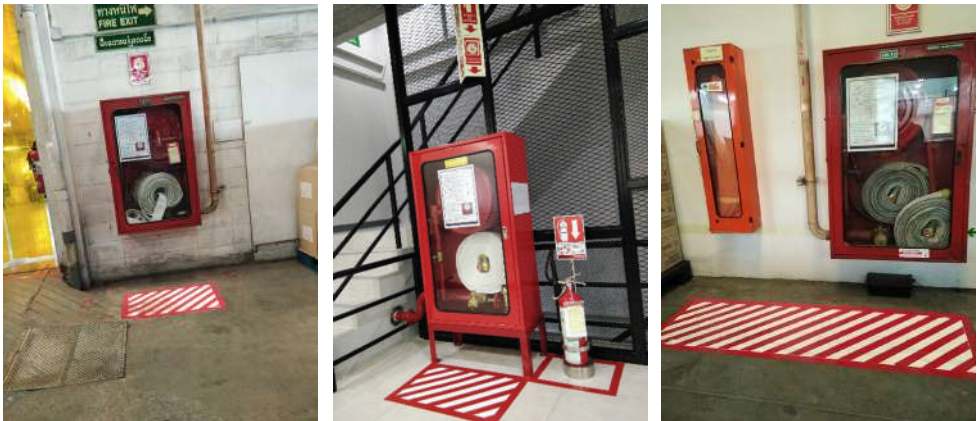


▼ The use of springer training



Safety and Occupational Health

▶ Line drawing in forbidden areas for placing the area of emergency equipment

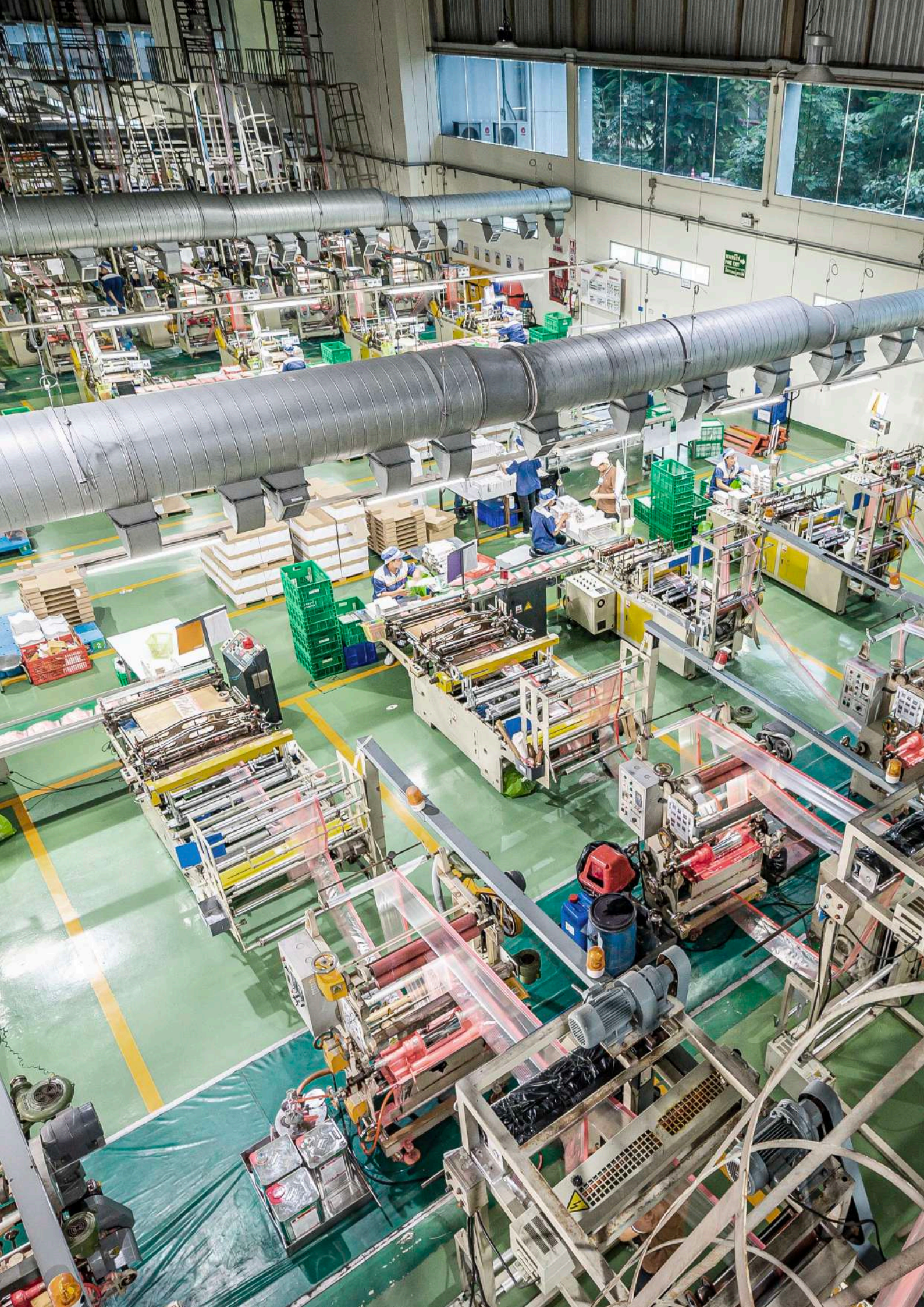


▶ Safety training course



▶ The fundamental of first aid training





GRI Content Index



GRI Standard		Disclosure	Page number (s)	SDGs	External Assurance
GRI 101: Foundation 2016					
General Disclosures					
General Disclosure 2016	ORGANIZATIONAL PROFILE				
	102-1	Name of the organization	4		
	102-2	Activities, brands, products, and services	4-9		
	102-3	Location of headquarters	4		
	102-4	Location of operations	4		
	102-5	Ownership and legal form	13		
	102-6	Markets served	4		
	102-7	Scale of the organization	4		
	102-8	Information on employees and other workers	51-52	SDG 8	
	102-9	Supply chain	35		
	102-10	Significant changes to the organization and its supply chain	2-3		
	102-11	Precautionary Principle or approach	30-31		
	102-12	External initiatives	-		
	102-13	Membership of associations	5		
	STRATEGY				
	102-14	Statement from senior decision-maker	2-3		
	102-15	Key impacts, risks, and opportunities	30-31		
	Ethics and Integrity				
	102-16	Values, principles, standards, and norms of behavior	28-29	SDG 16	
	GOVERNANCE				
	102-18	Governance structure	13		
	102-19	Delegating authority	19		
	102-20	Executive-level responsibility for economic, environmental and social topics	19		
	102-22	Composition of the highest governance body and its committees	13,19	SDG 5 SDG 16	
	102-24	Nominating and selecting the highest governance body	-		
	102-25	Conflicts of interest	28	SDG 16	
	102-26	Role of highest governance body in setting purpose, values, and strategy	19		
	102-28	Evaluating the highest governance body's performance	26-27		
	102-29	Identifying and managing economic, environmental, and social impacts	30-31	SDG 16	
	102-32	Highest governance body's role in sustainability reporting	26-27		
	102-33	Communicating critical concerns	24-25		



GRI Standard		Disclosure	Page number (s)	SDGs	External Assurance
GRI 101: Foundation 2016					
General Disclosures					
General Disclosure 2016	STAKEHOLDER ENGAGEMENT				
	102-40	List of stakeholder groups	24-25		
	102-41	Collective bargaining agreements	-		
	102-42	Identifying and selecting stakeholders	24-25		
	102-43	Approach to stakeholder engagement	24-25		
	102-44	Key topics and concerns raised	24-25		
	REPORTING PRACTICE				
	102-45	Entities included in the consolidated financial statements	-		
	102-46	Defining report content and topic boundaries	64		
	102-47	List of material topics	26-27		
	102-48	Restatements of information	64		
	102-49	Changes in reporting	64		
	102-50	Reporting period	64		
	102-51	Date of most recent report	64		
	102-52	Reporting cycle	64		
	102-53	Content point for questions regarding the report	64		
	102-54	Claims of reporting in accordance with the GRI Standards	64		
	102-55	GRI content index	58-63		
	102-56	External assurance			
Material Topics					
GRI 200 Economic Standard Series					
GRI 103 Management Approach 2016	ECONOMIC PERFORMANCE				
	103-1	Explanation of the material topic and its Boundary	32		
	103-2	The management approach and its components	32		
	103-3	Evaluation of the management approach	32		
GRI 201: Economic Performance 2016	201-1	Direct economic value generated and distributed	32-35	SDG 2 SDG 5 SDG 7 SDG 8 SDG 9	
GRI 103 Management Approach 2016	PROCUREMENT PRACTICE				
	103-1	Explanation of the material topic and its Boundary	35		
	103-2	The management approach and its components	35		
	103-2	Evaluation of the management approach	35		
GRI 204: Procurement Practices 2016	204-1	Proportion of spending on local suppliers	14		
Sustainable Supplier Development	BCP Indicator	Effective time and cost management of packaging procurement Percentage of efficiency in supplier contract management	-		



GRI Standard		Disclosure	Page number (s)	SDGs	External Assurance
Material Topics					
GRI 200 Economic Standard Series					
GRI 103 Management Approach 2016	ANTI-CORRUPTION				
	103-1	Explanation of the material topic and its Boundary	28-29		
	103-2	The management approach and its components	28-29		
	103-3	Evaluation of the management approach	28-29		
GRI 205 : Anti-Corruption 2016	205-2	Communication and training about anti-corruption policies and procedures	28-29	SDG 16	
	205-3	Confirmed incidents of corruption and actions taken	28-29	SDG 16	
Material Topics					
GRI 300 Environmental Standard Series					
GRI 103 Management Approach 2016	ENERGY				
	103-1	Explanation of the material topic and its Boundary	36-37		
	103-2	The management approach and its components	36-37		
	103-3	Evaluation of the management approach	36-37		
GRI 302 : Energy 2016	302-1	Energy consumption within the organization	36-37	SDG 7,8,12,13	
	302-2	Energy intensity	36-37	SDG 7,8,12,13	
GRI 103 Management Approach 2016	WATER				
	103-1	Explanation of the material topic and its Boundary	37-38		
	103-2	The management approach and its components	37-38		
	103-3	Evaluation of the management approach	37-38		
GRI 303 : Water 2016	303-1	Water withdrawal by source	37-38	SDG 6	
	303-3	Water recycled and reused	37-38	SDG 6,8,12	
GRI 103 Management Approach 2016	EMISSIONS				
	103-1	Explanation of the material topic and its Boundary	36-37		
	103-2	The management approach and its components	36-37		
	103-3	Evaluation of the management approach	36-37		
GRI 305 : Emissions 2016	305-1	Direct (Scope 1) GHG emissions	37	SDG 12,13,14,15	
	305-2	Energy indirect (Scope 2) GHG emissions	37	SDG 2,12,13,14,15	
	305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	-		
	OG6	Volume of flared and vented hydrocarbon	-		



GRI Standard		Disclosure	Page number (s)	SDGs	External Assurance
Material Topics					
GRI 300 Environmental Standard Series					
GRI 103 Management Approach 2016	EFFLUENTS AND WASTE				
	103-1	Explanation of the material topic and its Boundary	36-39		
	103-2	The management approach and its components	36-39		
	103-2	Evaluation of the management approach	36-39		
GRI 306 : Effluents and Waste 2016	306-1	Water discharge by quality and destination	37-38	SDG 3,6,12,14	
	306-2	Waste by type and disposal method	37-38		
	306-3	Significant spills			
GRI 103 Management Approach 2016	ENVIRONMENTAL COMPLIANCE				
	103-1	Explanation of the material topic and its Boundary	36-39		
	103-2	The management approach and its components	36-39		
	103-3	Evaluation of the management approach	36-39		
GRI 307 : Environmental Compliance 2016	307-1	Non-compliance with environmental laws and regulations	36-39	SDG 16	
GRI 103 Management Approach 2016	SUPPLIER ENVIRONMENTAL ASSESSMENT				
	103-1	Explanation of the material topic and its Boundary	35		
	103-2	The management approach and its components	35		
	103-3	Evaluation of the management approach	35		
GRI 308 : Supplier Environmental Assessment 2016	308-2	Negative environmental impacts in the supply chain and actions taken	-		
GRI 103 Management Approach 2016	ENVIRONMENTAL PROTECTION EXPENDITURES AND INVESTMENT				
	103-1	Explanation of the material topic and its Boundary	-		
	103-2	The management approach and its components	-		
	103-3	Evaluation of the management approach	-		
	BCP Indicator	Total environmental protection expenditures and investment type	-		
GRI 103 Management Approach 2016	PRODUCTS TRANSPORTATION				
	103-1	Explanation of the material topic and its Boundary	-		
	103-2	The management approach and its components	-		
	103-3	Evaluation of the management approach	-		
	BCP Indicator	Significant environmental impacts of transporting products	-		



GRI Standard		Disclosure	Page number (s)	SDGs	External Assurance
Material Topics					
GRI 400 Social Standard Series					
GRI 103 Management Approach 2016	EMPLOYMENT				
	103-1	Explanation of the material topic and its Boundary	51-52		
	103-2	The management approach and its components	51-52		
	103-2	Evaluation of the management approach	51-52		
GRI 401 : Employment 2016	401-1	New employee hires and employee turnover	51-52	SDG 5 SDG 8	
GRI 103 Management Approach 2016	LABOR/MANAGEMENT RELATION				
	103-1	Explanation of the material topic and its Boundary	51-52		
	103-2	The management approach and its components	51-52		
	103-2	Evaluation of the management approach	51-52		
	BCP Indicator	Best Employer Score by AON Hewitt	-		
GRI 103 Management Approach 2016	OCCUPATIONAL HEALTH AND SAFETY				
	103-1	Explanation of the material topic and its Boundary	53-55		
	103-2	The management approach and its components	53-55		
	103-2	Evaluation of the management approach	53-55		
GRI 403 : Occupational Health and Safety 2016	403-2	Types of injury and rates of injury, occupational diseases, lost days, and number of work-related fatalities	53	SDG 3 SDG 8	
	OGSS	Emergency Preparedness	-		
GRI 103 Management Approach 2016	TRAINING AND EDUCATION				
	103-1	Explanation of the material topic and its Boundary	52		
	103-2	The management approach and its components	52		
	103-2	Evaluation of the management approach	52		
GRI 404 : Training and Education 2016	404-1	Average hours of training per year per employee	52	SDG 4,8,5	
	404-3	Percentage of employees receiving regular performance and career	52	SDG 4,8,5	
GRI 103 Management Approach 2016	LOCAL COMMUNITIES				
	103-1	Explanation of the material topic and its Boundary	40-50		
	103-2	The management approach and its components	40-50		
	103-2	Evaluation of the management approach	40-50		
GRI 413 : Local Communities 2016	413-1	Operations with local community engagement, impact assessment, and development programs	40-50		



GRI Standard		Disclosure	Page number (s)	SDGs	External Assurance
Material Topics					
GRI 400 Social Standard Series					
GRI 103 Management Approach 2016	SUPPLIER SOCIAL ASSESSMENT				
	103-1	Explanation of the material topic and its Boundary	-		
	103-2	The management approach and its components	-		
	103-2	Evaluation of the management approach	-		
GRI 414 Supplier Social Assessment 2016	414-2	Negative social impacts in the supply chain and actions taken	-		
	BCP Indicator	Number of suppliers that were self-assessed using SCOC criteria	-		
GRI 103 Management Approach 2016	MARKETING AND LABELING				
	103-1	Explanation of the material topic and its Boundary	10-12		
	103-2	The management approach and its components	10-12		
	103-2	Evaluation of the management approach	10-12		
GRI 417 : Marketing and Labeling 2016	417-3	Incidents of non-compliance concerning marketing communications	-		
GRI 103 Management Approach 2016	SOCIOECONOMIC COMPLIANCE				
	103-1	Explanation of the material topic and its Boundary	28-29		
	103-2	The management approach and its components	28-29		
	103-2	Evaluation of the management approach	28-29		
GRI 419 : Socioeconomic Compliance 2016	419-1	Non-compliance with laws and regulations in the social and economic area	29	SDG 16	



About the sustainability report

History of sustainability report

Thantawan Industry Public Co., Ltd. has conducted the sustainability report in 2019 to inform annual performance in terms of economic, social and environmental metrics (Disclosure 102-52). Reporting period is from January 1 to December 31, 2019 (Disclosure 102-50). This report was developed by following GRI Sustainability Reporting Standards (GRI Standards) (Disclosure 102-54). THIP has conjoined the performance of corporate strategies that meet the United Nations Sustainable Development Goals (SDGs).

Scope of this report (Disclosure 102-45, Disclosure 103-1)

This report presents the operating results in 2019. The reporting cycle is from January 1 to December 31, 2019 of Thantawan Industry Public Company Limited covering the performance of both factory and office, Suntowers Building.

The credibility of report

This report reviews key content from senior management of each department (Disclosure 102-32) through the sustainability committee meeting of the organization's policy to ensure that the complete report will accurate and comprehensive response to all stakeholder groups.

Information inquiry

For further information, please contact Social Affairs Department for Corporate Sustainability Thantawan Industry Public Company Limited.

E-mail : corpcom@thantawan.com

Tel . 0 2273 8333





SUSTAINABILITY REPORT 2019

HEAD OFFICE (FACTORY)
143-144 MOO 8, SOI KANGVAL 2,
PHETKASEM RD., OMYAI, SAMPRAN,
NAKORNPATTHOM 73160 THAILAND.
TEL. +66 2431 3051, 2811 4700
FAX. +66 2431 3056-7

BRANCH NO.1 (OFFICE)
32ND FL., SUNTOWERS BLDG.A,
123 VIBHAVADI-RANGSIT RD.,
CHOMPHON, CHATUCHAK,
BANGKOK 10900 THAILAND.
TEL. +66 2273 8333
FAX. +66 2273 8282, 2273 8484

BRANCH NO.2 (FACTORY)
197-198 MOO 1, PHETKASEM RD.,
YAICHA, SAMPRAN,
NAKORNPATTHOM 73110 THAILAND.
TEL. +66 2431 3051, 2811 4700
FAX. +66 2431 3056-7



WWW.THANTAWAN.COM