



KSL GROUP

Sustainability Report

Sustainability Report

About this Report

This Sustainability Report for 2018, the information in which lasts from 1 November 2017 to 31 October 2018 is in accordance with Global Reporting Initiative (GRI-G4) of core level in respect of the following issues.

Environment

Energy

Aggregated Energy consists of heat energy and electricity energy used in the area of the Company or the factory. The data of heat energy is collected from quantity of fuel recorded in accounting or from meter multiplied with heat conversion. Data of electricity usage is collected from electricity invoice submitted by the provider.

Greenhouse Gas

The amount of GHG means the released quantity of GHG in the operation that is calculated according to the guideline for evaluating carbon footprint provided by the Greenhouse Gas Management Organization (Public Organization) revised the first time on 1 October with the following scope of report.

- GHG with direct occurrence (Scope 1) is generated from activities within the Company's control e.g., boiler, vehicles used in Company transportation.
- GHG with indirect occurrence (Scope 2) is generated from the purchase of electricity from external sources.

The report of quantity of GHG (Scope 1) and GHG (Scope 2) uses the quantity of used fuel multiplied with the parameter of released GHG based on the Greenhouse Gas Management Organization (Public Organization).

Emissions

Dust, Sulphur Oxide and Nitrogen Oxide are calculated by using the concentration measured pursuant to the law multiplied with the flow rate of wind and working hours of machinery.

Water Withdrawal

The volume of water withdrawal is the withdrawal of water from various sources to be used in the Company's activities. The data is collected from invoices. The water sources consist of surface water and underground water.

Waste

Waste is divided into two types, namely, hazardous waste and non-hazardous waste pursuant to the Notification of the Ministry of Industry on the management of waste or non-used materials B.E. 2548. The quantity of waste is reported from the weighing of waste.

Safety

Information regarding employees and business partners which is collected from company's staff, outsourced workers and contractors.

The recording of safety data consists of

1. Aggregated accident rate means the number of accidents which occur in each 200,000 hours per person.
2. Accident rate resulting in stoppage of work means the number of accidents which results in stoppage of work which occur in each 200,000 hours per person.
3. Rate of Stoppage of work from accident means the number of stoppage day resulting from accidents which occur in each 200,000 hours per person.
4. Rate of Leave means the number of days of leave resulting from accidents and sick leave due to work, not including leave for rest and leave to give birth which occur in each 200,000 hours per person.

Procedures of reporting issues of sustainability materiality (G4-18)

The group of companies has prescribed three significant issues on sustainability for the first time this year (between the fiscal year starting from 1 November 2017 to 31 October 2018), namely, economic, social and environmental issues and has prescribed important sub-issues together with the hearing from stakeholders with these steps.

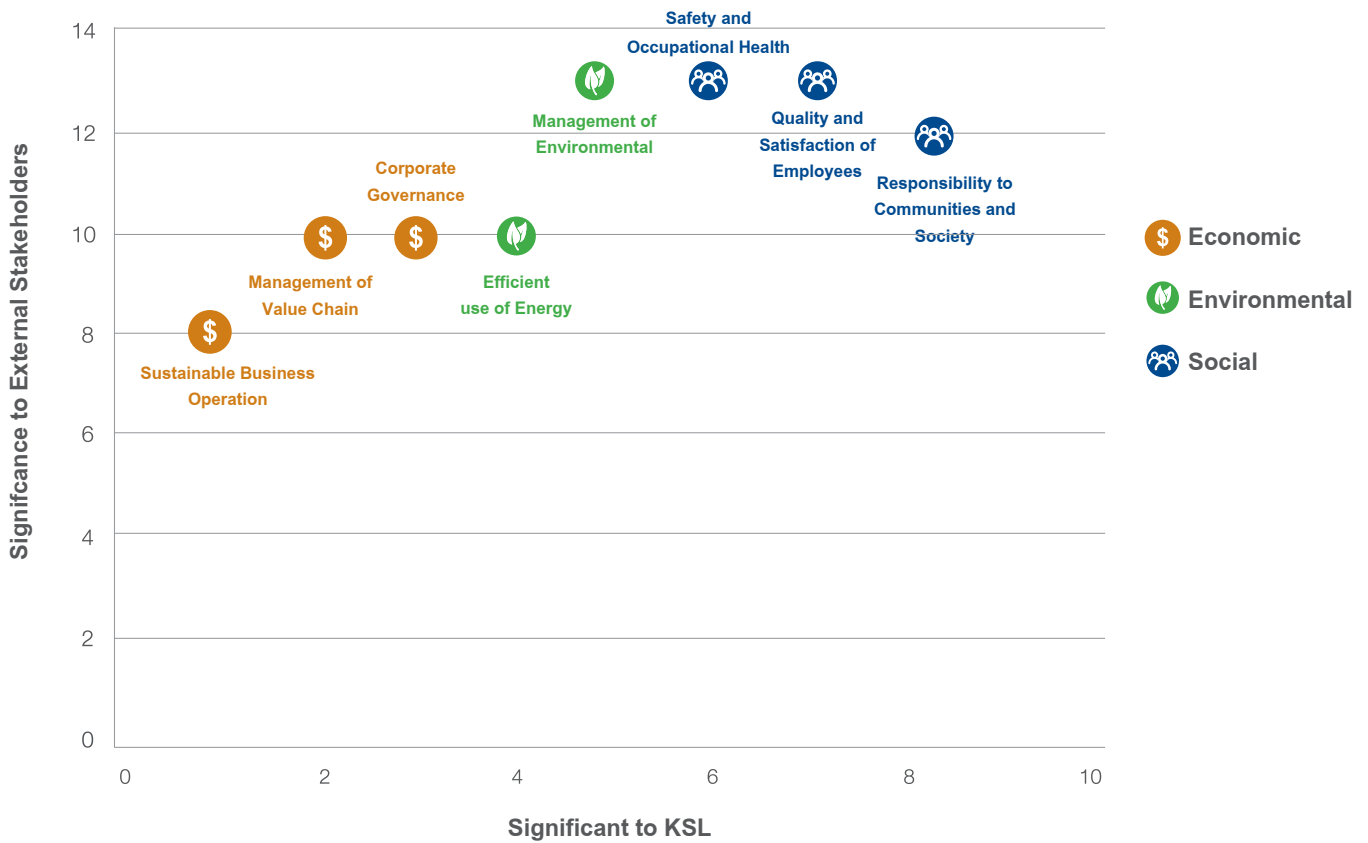
Step 1 Important issues are prescribed to be consistent with the Company's vision, mission, strategies, risks and the stakeholders' perspectives in accordance with the standard indicators used in Global Reporting Initiative (GRI).

Step 2 Prioritize the materiality of the issues obtained in Step 1 by assigning the relevant units to select the important issues within the framework which requires the priority of issues pursuant to the sustainable development of the group of companies and the benefits of the stakeholders.

Step 3 Re-check the materiality of the issues obtained in Step 2 by assigning the relevant units to present the issues which are reviewed in Step 3 to the Executive Board for approval the reporting of these sustainability issues to public.

Step 4 The Company assigns the internal audit office to recheck the procedures of evaluating material issues, collection and processing of data, participation of stakeholders, operation in respect of society, safety and environment so that the information is correct and complete.

Significant Sustainability Issues



Economic	Environmental	Social
<ul style="list-style-type: none"> - Sustainable Business Operation - Management of Value Chain - Corporate Governance 	<ul style="list-style-type: none"> - Efficient use of Energy - Management of Environmental 	<ul style="list-style-type: none"> - Safety and Occupational Health - Quality and Satisfaction of Employees - Responsibility to Communities and Society

Scope of the Report (G4-18)

The information regarding sustainability as hereby reported belongs to the group of companies which are value-chain related to each other, namely, the companies that operate sugar business, biomass electricity business and bio-fuel, dividing by branches where the factories are located.

Company	Environment					Safety	Human Resources
	Energy	Greenhouse Gas	Emission	Water Withdrawal	Waste	Accident	Training
Khon Kaen Sugar Industry PLC (Nampong Branch)	●	●		●	●	●	●
Khon Kaen Sugar Industry PLC (Wangsapung Branch)	●	●		●	●	●	●
Tamaka Sugar Industry Co., Ltd.	●	●	●	●	●	●	●
New Krung Thai Sugar Industry Co., Ltd.	●	●		●	●		●
New Kwang Soon Lee Sugar Factory Co., Ltd.	●	●	●	●	●	●	●
Khon Kaen Power Co., Ltd. (Nampong Branch)	●	●	●	●	●	●	●
Khon Kaen Power Co., Ltd. (Wangsapung Branch)	●	●	●	●	●	●	●
Khon Kaen Power Co., Ltd. (Boploy Branch)	●	●	●	●	●	●	●

Corporate Governance Structure (G4-34)

The Corporate Governance Committee is the body which has roles and duties as reported in topic at page 25,71 The mentioned roles and duties include the mission to supervise the Company to implement the policy regarding environment and society because apart from the good corporate governance to steer the operation with transparency, integrity, accountability and conscience, the policy also requires the Company to take into account the protection of environment and social development, risk assessment and impact on environment and safety before investment, compliance with laws concerning environment and natural resources, production management to minimize impact on environment and natural resources.

Material Issues and Scope of impact inside and outside the Company (G4-19,G-20,G4-21)

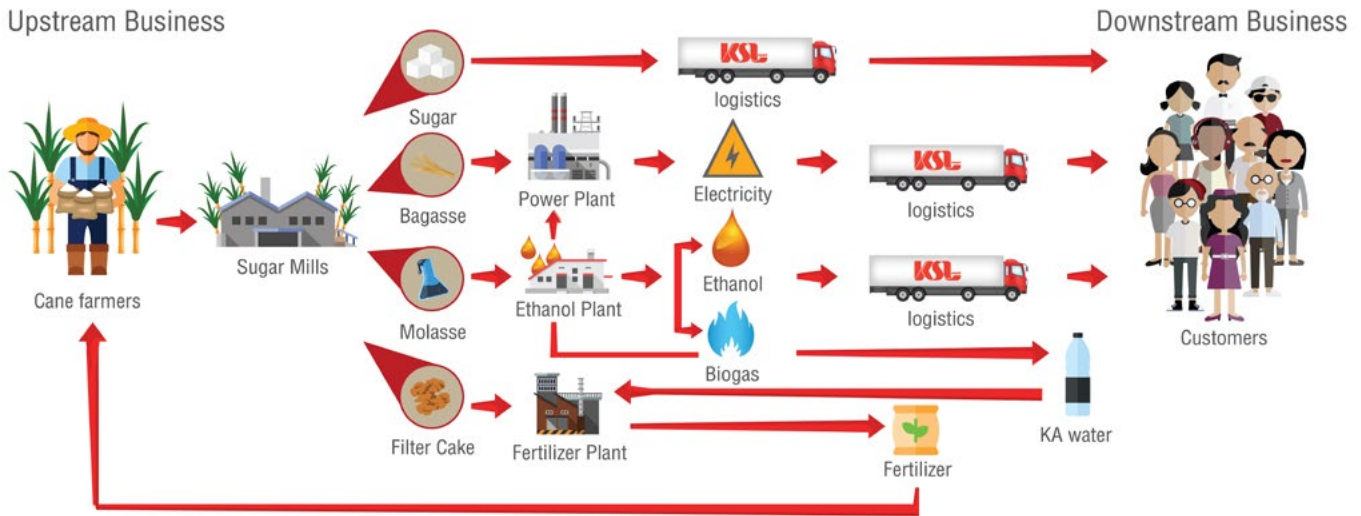
Sustainability Issues of the group of Companies	Sustainability Issues pursuant to GRI (G4-19) on internal units of the Company	Scope of Impact (G4-20, G4-21)			
		on takeholders outside the Company	related external takeholders	related external stakeholders	
1. Sustainable business operation	-proper strategies -risk management and internal control	-strategy making process -corporate governance			shareholders, creditors, farmers
2. value-chain	-raw materials procurement -procurement of goods and contractors	- evaluation of farmers and suppliers regarding environment aspects, labor protection and human rights			farmers, suppliers, contractors
3. Corporate governance	-corporate governance - business ethics - measures against fraud and corruption	-implementation of corporate governance policy and Manual on measures against fraud and corruption - recognition of integrity - corporate culture formulation			shareholders, staff, farmers, suppliers, customers, society
4. Efficient use of energy	-reduction of energy use -optimization of energy use	-measurement of used energy -energy management			Community, government units
5. Environmental management	-reduction of emission -management of industrial waste	-environment standard -community grievances			Community, government units, customers
6. Occupational Health and Safety	-safety of staff -safety of machinery and equipment -emergency management	-occupational health and safety -checking of machinery and equipment -safety manual compliance -handling emergency			Staff, suppliers, government units
7. Quality and Satisfaction of staff	-Personnel Development -Keeping of personnel and recruitment -benefits and welfare	-training -staff recruitment -succession plan for high ranking staff -relationship management between employer and employee			Staff, customers
8. Responsibility to community and society	-good relationship with community -solution of problems to community	-steady relationship building -increase of quality of life to community			Farmers, community, government units, customers

Stakeholders related to the group of companies (G4-25)

The group of companies has categorized the stakeholders both inside and outside the companies into 8 groups, namely, cane farmers, shareholders, suppliers/contractors, customers, financial institution creditors, community/society, government units (including government agencies and local administration) which are consistent with the group of stakeholders as prescribed in the Corporate Governance Policy (1st revision). Each group of stakeholders has different expectation and receives different impact from the operation of the companies. The group of companies has considered the matters thoroughly in formulating sustainability information that is shown in the Annual Report.

Table of Stakeholders (G4-24, 26, 27)

Groups of Stakeholders (G4-24)	Behavior/incidents of interest (G4-26)	Issues received form the stakeholders (G4-27)	Referred to the Annual Report
cane farmers	<ol style="list-style-type: none"> 1. farmer visit 2. farmer meeting 3. invitation to company ceremony or activities 	<ol style="list-style-type: none"> 1. more promotion in terms of technology and revolving fund 2. rapid discharge of sugar cane at the factory 3. farmers' cooperation 	<p>Topic</p> <p>Page</p>
shareholders	<ol style="list-style-type: none"> 1. Annual General Meeting 2. Annual Report 3. disclosure of information to Stock Exchange of Thailand 4. Quarterly meeting with analysts 5. (Opportunity Day for investors 6. communication to various channels e.g., telephone, emails, website 7. inquiry or complaints through provided channels 	<ol style="list-style-type: none"> 1. appropriate and steady return of investment 2. prudent investment 3. transparency and accountability 	<p>Topic</p> <p>Page</p>
Suppliers / contractors	<ol style="list-style-type: none"> 1. meeting and seminars 2. communication to various channels e.g., telephone, emails, website 3. complaints through provided channels 4. attending activities of the companies 	<ol style="list-style-type: none"> 1. fair and transparent procurement 2. timeliness of job reception 3. timeliness of payment for goods / fee 4. work safety 	<p>Topic</p> <p>Page</p>
customers	<ol style="list-style-type: none"> 1. visiting customers 2. inviting customers to visit factories 3. survey of customers' satisfaction 4. communication to various channels e.g., telephone, emails, website 5. complaints through provided channels 	<ol style="list-style-type: none"> 1. acknowledgment of customers' need 2. quality improvement of products 3. improvement of delivery 4. improvement of after sale service 6. compliance with human rights principles, environment standard and labor standard 	<p>Topic</p> <p>Page</p>
Financial institution creditors	<ol style="list-style-type: none"> 1. Annual Report 2. Financial statements 3. disclosure of information for credit analysis 	<ol style="list-style-type: none"> 1. timeliness of payment 2. use of appropriate financial service 	<p>Topic</p> <p>Page</p>
staff	<ol style="list-style-type: none"> 1. Newsletter 2. intranet ,video-conference 3. meeting / seminar / training 4. annual division meeting 5. meeting between supervisors and staff 6. annual employee evaluation 	<ol style="list-style-type: none"> 1. competitive benefit and remuneration 2. promotion through career path 3. self- development 4. recognition from supervisor and colleagues 	<p>Topic</p> <p>Page</p>
Community / society	<ol style="list-style-type: none"> 1. regular interaction with community 2. attending community's activities 3. advice on occupational opportunity to community 	<ol style="list-style-type: none"> 1. reduction of impact form factory to community 2. support to community's activities 3. elevation of community's living standard 	<p>Topic</p> <p>Page</p>
Local administration / government units	<ol style="list-style-type: none"> 1. attending and supporting activities 2. coordination with government agencies 3. permission or license seeking as required by law 	<ol style="list-style-type: none"> 1. compliance with laws 2. cooperation with government agencies for local development 3. abolition or reduction of environmental impact on community 	<p>Topic</p> <p>Page</p>



Economy Aspects

1. Sustainable Business Operation.

The Company is well aware that, in doing business sustainably, there must be a good balance between business stability (including yearly profit and long-term growth of business) and care of environment, society and corporate governance.

As for business stability, the Company has operated its business in line with the vision and strategies and reviewed or solved the problems to respond to the goals within the framework of corporate governance. The Policy has set a clear path that the Company’s business process must not create environmental and social problems and shall promote activities that help protect environment and develop society simultaneously.

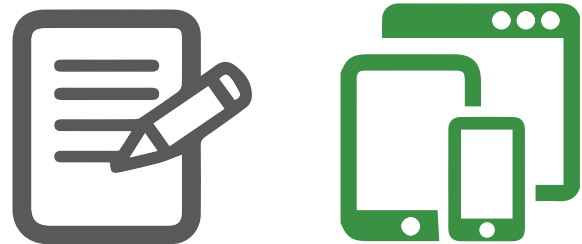
Sustainable Value Chain G4-12

Value-chain management (G4-12)

The group of companies produces sugar From Value-chain picture main raw material – sugar cane. The Companies regard cane farmers very important stakeholder. Project iCane consists of four sub-projects. Project iFarm iMap iForm iCash. The project is meant to develop quality and efficiency of promotion for farmers and cane growing by applying information technology innovation to improve the process so as to be able to respond the farmers’ need and to enhance the efficiency of service for the farmers.

iMap and iForm projects have been implemented and the equipments are used by the staff to do the task more efficiently.

iForm project is an innovation bringing technology to develop the work process of staff by reducing working steps and increasing convenience to farmers.



Previous pattern	New pattern
1. Use paper forms for farmers	1. Input farmers’ information to tablets
2. Bring papers to process in office	2. Upload information for consideration
3.5-14 days for total work process	3.2-6 days for total work process

The use of technology makes the work convenient and rapid and reduces unnecessary work process. The farmers can manage their time and receive quick service while the staff can solve problems immediately.



iMap project concerns the use of similar technology to iForm but focuses on the management of cane farm information, ranging from planting areas, maintenance, harvesting, logistics, monitoring as well as anticipation the time to harvest. It helps manage the cane farms more effectively by reducing the waiting time to load sugar cane at the mills. The sugar cane is thus of better quality.

Apart from the above-mentioned, the group has renders organic cane project and CCS project.

Organic Cane Project is aimed to plant sugar cane with organic agriculture by using organic fertilizer in the farm to produce 100 per cent from nature sugar cane and to keep the soil surface. The sugar cane price shall be higher. By average, the sugar cane using organic fertilizer get 1-2 % higher price than those grown with chemical fertilizer.

CCS in cane Project is a cooperation among Yamaha, the Office of Cane and Sugar Board and KSL group of companies to experiment the use of Yamaha air plane to put the fertilizer in the farm to increase CCS scale in sugar cane. The Project aims at higher value of sugar cane at the same quantity. The farmers shall get higher price from high CCS sugar cane. The sugar mills shall get good quality of sugar cane to produce good quality sugar to their customers.



KSL Junior Farmer 2018 Project stems from the wish of KSL group of companies to encourage the succession of sugar cane filed business to the succeeding generation. The Sugar Cane Procurement Division formulates a curriculum of New Junior Farmer with the objectives to support the farmers to manage sustainable sugar cane field, to expand the produce, to create relationship between farmers and the factory, to share knowledge regarding the cane growing and other aspects among new generation of farmers.

The project is focused at the new farmers who are interested in sugar cane business and wish to sustain their business for their future and to maintain the occupation with stability and sustainability.

The activities for the new farmers in 2018 is held at KSL River Kwai Park and Resort during 12-14 September 2018. The topics to be discussed includes 1) the knowledge in sugar cane business emphasizing on the analysis for

investment 2) the increase of productivity by modern farm management and appropriate application of technology and 3) the applied Sufficiency Economy in business.

Quality Policy

“Quality Sugar with highest efficiency, on-time delivery, customer’s confidence, consumer’s safety”

QUALITY POLICY

“Quality Sugar with **HIGHEST EFFICIENCY**, on-time delivery, **CUSTOMER’S** confidence, consumer’s safety”

Manufacturing Standards and Customers’ Need

Manufacturing Standard

Manufacturing standard includes accepted manufacturing process in the mills. As all of customers are industrial customers, the companies deem manufacturing standard as high priority. The products must comply with the customers’ standards or internationally or domestically accepted standards.

The group of companies have corporate governance policy and guidelines in respect of customers in a Chapter on Roles of Stakeholders such as the use of international standard, quality management , TIS 56-2552, etc.

Apart from the said corporate governance policy, the group emphasizes on sustainable business operation throughout the value chain. The world class standard regarding sustainable production of agricultural goods in cane and sugar industry, namely, Bonsucro, is adopted. The standard applies to the production process, starting from the growing of sugar cane in the farm, the production of sugar in the mills to the delivery of goods to customers. As such, the standard integrates sustainability of the economic, social and environmental aspects. It helps reduce cost, develop quality and quantity of production, comply with labor standard and human right protection, conserve environmental balance as well as develop the cane farmers’ quality of life.

At present, buyers in the world market accept Bonsucro standard in respect of sustainability ranging from upstream to downstream and have procurement policy to use raw materials that pass the production process under certified sustainability standard. This is a further step of the Company to build up sustainability and to increase competitive edge in the world market.

Customers’ need

To respond to customers’ highest satisfaction regarding quality and product standard, the Company deems very important to deliver the goods on time, to extend international standard service and to maintain customers’ confidential information as well as to exercise business ethics in respect of responsibility and relationship with the customers in the long run.

The Company communicates with customers through various channels and makes customer visits to acknowledge customers’ needs and to convey useful information to customers.

By the same token, the Company invites customers to visit and to audit the work process of the Company and the factories so that the customers can consider the Company’s potential and capacity to supply the products as per the customers’ standard. The Company also surveys the customers’ satisfaction annually and takes into consideration the customers’ comments to improve the Company’s service and production process.

Factory’s Standard of Quality

The companies continually improve the quality of factories. In 2018, the companies are granted with the following quality systems: ISO9001:2015, GMP, HACCP, ISO22000, FSSC22000, Halal, Kosher and good governance in environment.

3. Corporate Governance

The Company considers the corporate governance an essential mechanism for the Company to administer a good relationship with all stakeholders, namely, shareholders, staff, farmers, suppliers, customers, community and government agencies. The Company therefore has a clear policy of corporate governance regarding each group of stakeholders so that the operation shall be subject to transparency, accountability, efficiency and responsibility to society and environment.

This report alludes to the Corporate Governance Policy and the governance at page 56

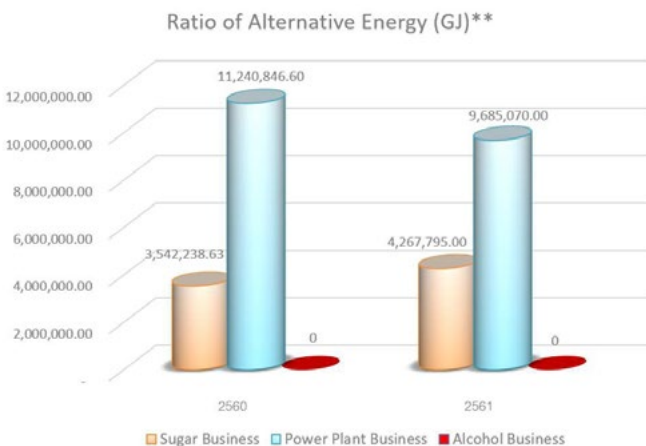
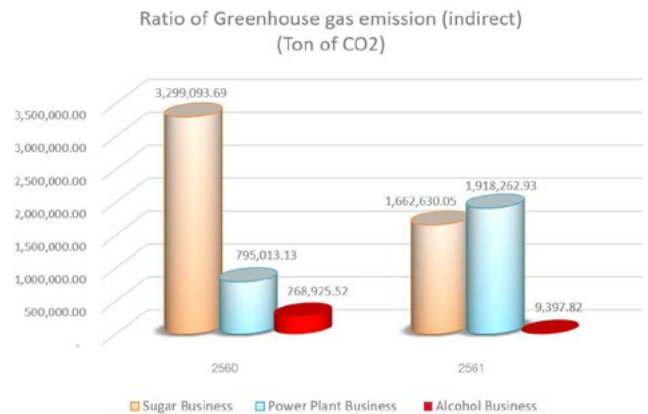
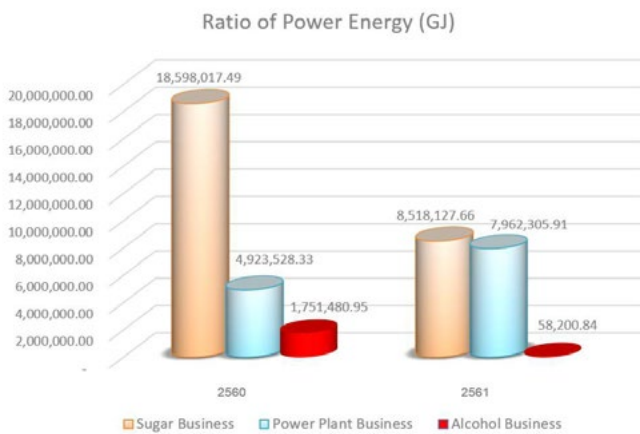
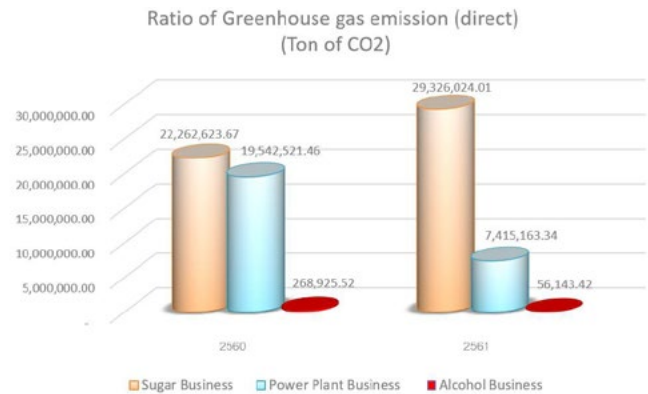
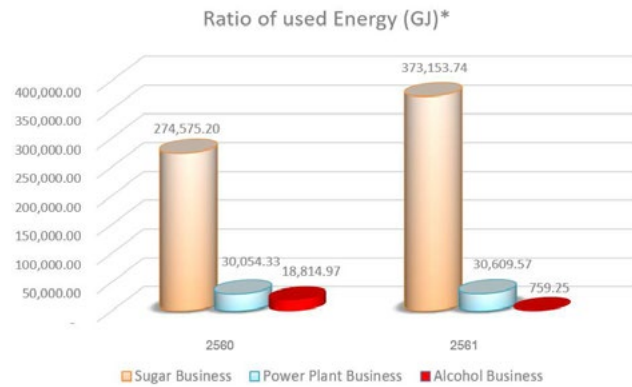
Environmental Aspects

4. Efficiency in Energy Use (G4-EN3)

The group of companies regards the management of energy and climate change as important matters to prevent any effect to community, environment and cost-saving related to energy. Furthermore, the stakeholders also emphasize in issues related to climate change and global warming caused by greenhouse gas emission.

Greenhouse Gas Management (G4-EN 15,G4-16)

The group of companies conducts measures to reduce greenhouse gas, both direct and indirect, to reduce energy use in sugar manufacturing process and in office. Also, there is a promotion to reduce energy use along with increasing area for containing greenhouse gas by increasing green area in factory, reforestation and to promote activities related to community forest across country by cooperation with government agencies and other organizations.



Note

* Diesel/Benzene (Litre) X Conversion rate (Megajoule)/ 1000
 **Alternative Energy is bagasse derived from sugar production process
 ** Bagasse (Ton) X Low Heating Value/0.004186

Note

* Direct Greenhouse Gas Emission is the volume of diesel/benzene/LPC (litre) x Emission factor = Ton carbon dioxide
 * Indirect Greenhouse Gas Emission is the volume of electricity bought from external source (Megawatt / Hour) X Emission factor = Ton carbon dioxide
 * Emission Factor is referred to Thailand Greenhouse Gas Management Organization (Public Organization)

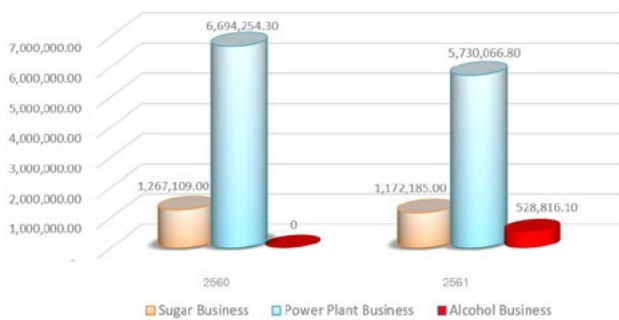
5. Environment Management

Water Management (G4-EN-8)

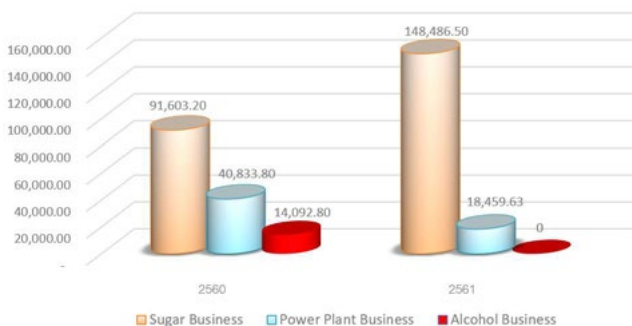
Water pumping from raw water source is classified into 2 portions, namely water in manufacturing process and water in office. Wastewater from sugar manufacturing process is mainly water from cooling system used in exchanging temperature. Wastewater will be transmitted into treatment system by sedimentation and deposition and then reduced temperature approximate with nature, before emission from factory, in order to ensure water quality as emitted in line with required standard such as standards of Royal Irrigation Department and Ministry of Industry. The process is meant to prevent adverse effect to biological diversity of water source. For water used in office, after standard treatment, the treated water will be used in watering system, agriculture demonstration plot and wetlands.



Quantity of Surface Water
(Cubic Meters)



Quantity of Underground Water
(Cubic Meters)



The group of companies has measures to control quantity of water for best utilization by applying with 3R as follows;

Reduce: Reducing quantity of using water in factory during crushing period, by using condensate water (water derived from condensed steam) in manufacturing process to reduce the use of soft water, controlling proper blow down rate of steam boiler and controlling the use as necessary of soft water to reduce using chemical/water.

Reuse: Reusing water/using water effectively; water from cooling system (condenser water) will be used with water system to get rid of ash from steam boiler, to wash boiler, to clean floor of factory; reusing water from cooling system of operating room; taking blow down water from cooling tower to blend with condenser water system.

Recycle: Used water will be treated and used in condenser cooling system, fire protection system, spraying bagasses, spraying truck parking ground to prevent dust and watering trees and green areas to ensure limitation of quantity of drainage out into environment as necessary, The group of companies installs treatment system suitable with wastewater in each type to be effective in treatment system and to get post-treatment quality water in order to prevent effect to water source and utilization by the community.

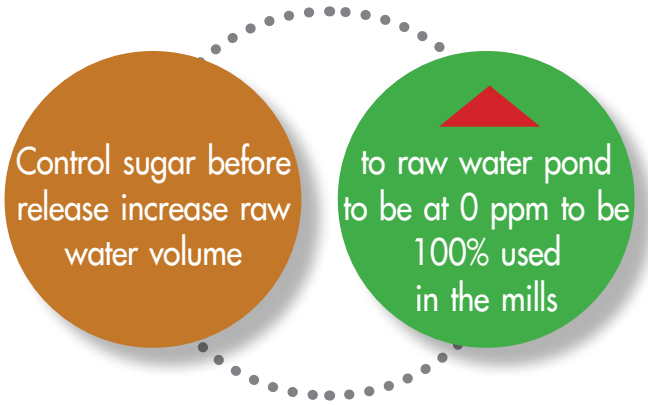
Submerge Aerated Fixed Film Project (Reused Water)

Each year, there is condensate water of approximately 400,000 – 600,000 cubic meter (varying to the crushed sugar cane volume). The group of companies are aware of this waste and attempt to treat the waste water so that it can be reused for utmost benefit and shall not cause adverse effect to community and environment. The project is accordingly designed.

The objectives of the project are

1. To treat and to reduce the sugar which is mixed in the condensate water and to reuse the water
2. To reduce the shortage of raw water to be used in the mills
3. To reduce environmental impact

Goals of the project



Benefit from the project

1. 100 % reuse of water
2. Reduce the discharge of waste water to environment to zero waste which no effect to community and environment

Note The Information as to Submerge Aerated Fixed Film (SAF) belongs to New Krung Thai Sugar Factory Co., Ltd.

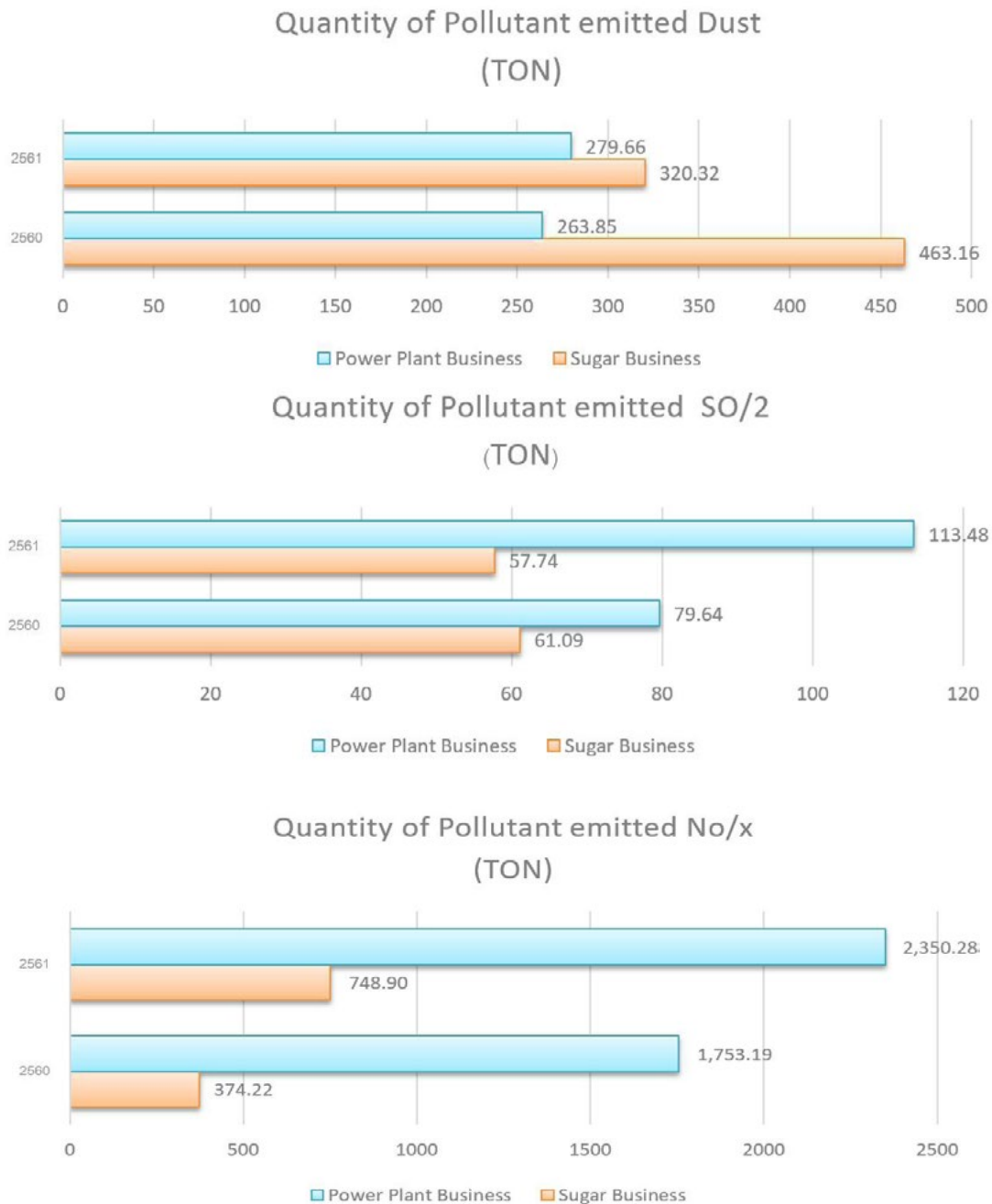
The group receives awards in respect of environment such as Green Industry Level 3, 3Rs awards, Zero Waste Achievement Awards and 3R+ Awards (Bronze Level) for achieving the disposal management standard within the factory under the project for development of potential to utilize industrial waste from the Department of Industry, Ministry of Industry.



Note The information regarding awards belongs to Tamaka Sugar Industry Co., Ltd

Air Pollution Reduction (G4-EN21)

The group of companies materializes the reduction of impact occurring from operation and also realizes the importance of being with community surrounding the factory by closely measuring the amount of gas emission as required by law, inspecting operation related to environment aspects to be in line with plan and target to ensure that the impact on the surrounding community shall be minimized and the operation shall be respectively improved.



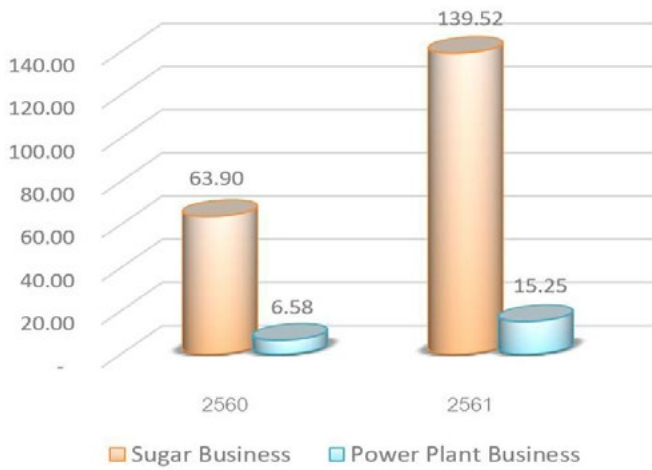
* ไม่มีรายงานของธุรกิจแอลกอฮอล์เนื่องจากไม่มีการเผาไหม้

Industrial Solid Waste Management (G4-EN23)

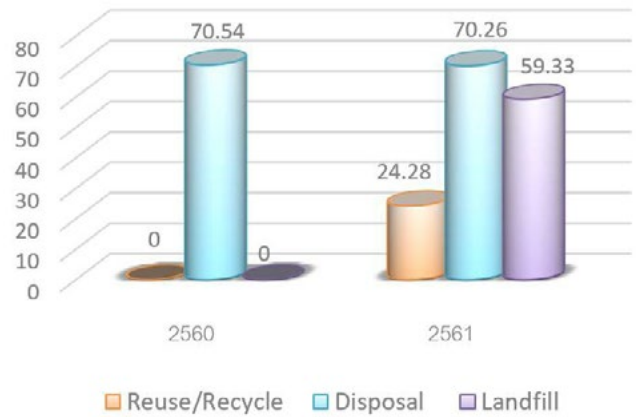
To ensure least quantity of remains from manufacturing and maintenance process to be disposed, the group of companies controls the use of raw materials and equipment for maintenance effectively and selects the method of disposing remains with minimal effect against environment. Each factory is careful about selecting the waste management provider and its careful disposal method which must be in compliance with the laws.. Furthermore, the factory keeps monitoring the disposal of the waste management provider to ensure that the waste will be managed correctly and properly, in accordance with standard Ministry of Industry.

In sugar manufacturing process, there is organic residue called filter cake, that is the mixture of soil, sand and organic matters from sugar cane. The sugar factories usually use this filter cake as raw material for producing natural fertilizer or soil improvement element or deploy it in the sugar cane field to help increase the soil quality.

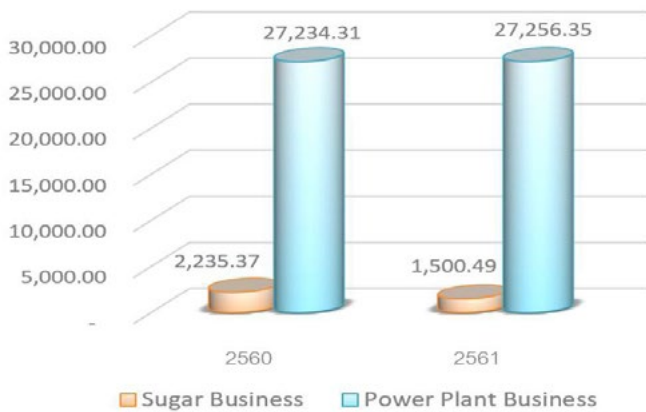
Quantity of Hazardous Waste (Ton)



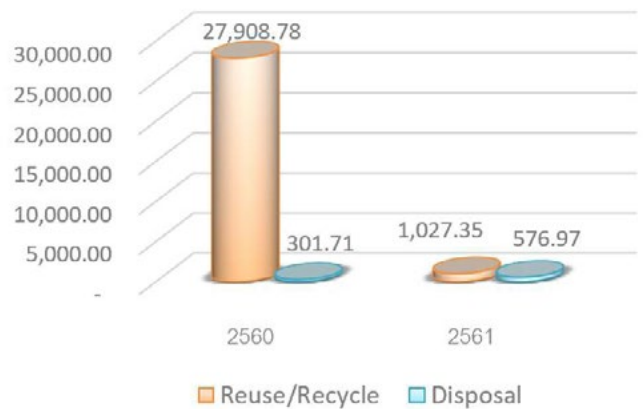
Waste Management Hazardous Waste (Ton)



Quantity of Non-hazardous Waste (Ton)



Waste Management Non-hazardous Waste (Ton)





Safety Health and Environment (SHE DAY)

Social Aspects

6. Safety and Occupational Health (G4-LA6)

The Company regards the importance of safety and hygienic conditions in the workplace both at the office and factories and sets up a Committee on Safety, Occupational Health and Environment in the factories to take care of the safety and hygienic conditions of the employees by examining the safety in the workplace regularly, installing alarm system within the premises, providing fire extinguishers and fire exit, scheduling annual fire evacuation. The factories additionally build work environment which is safe for employees, contractors and visitors with controlling measures as well as provide training for security staff to build confidence to the stakeholders.

Safety is priority. The group of companies, therefore, sets a target to be the organization without any accident to employees, contractors and all interested parties to prevent any losses to life and property.

Kiken Yoshi Training (KYT) activities- Training for Alert

KYT activity is a training for awareness of hazard. It is a group activity to have work safety by training the anticipation of hazard with the concept of quick and accurate cooperation by pointing fingers and verbal repeat. The training covers technical knowledge, sensitivity of hazard awareness including concentration, enthusiasm, unity building and all in one coordination.

KYT activity emphasizes on self-problem fixing by promoting the un compelled activity by the staff. The activity is important to build discipline, unity, enthusiasm that are all useful in the workplace.

KYT activity keeps the staff alert of human error before start working as the accident may happen at any time and may cause unpredictable damage.

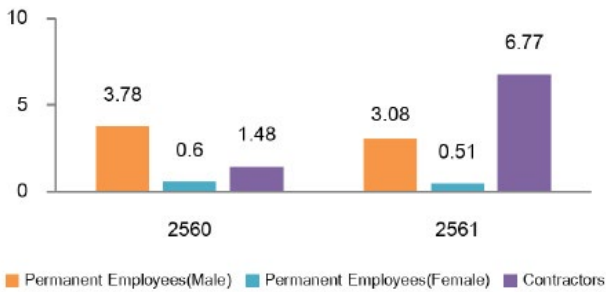
It is the activity that the operating staff shall participate by thinking of imminent danger in the work and warn themselves by applying "finger pointing and keep saying" method.

The conditions of KYT activity is that everyone must speak out with sincerity and must listen to opinions of others. It needs serious co-thinking or brainstorming. It is well aware that the order for safety of the supervisors is not enough because the staff would practice only when they get the order which sometimes does not match with the on-site problems.

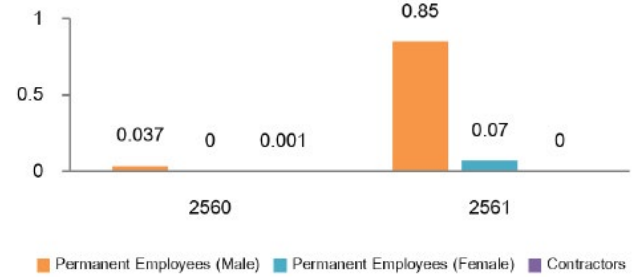
Safety, Health and Environment Activity (SHE Day)

SHE day activity is the activity that the group organized in June of every year in order to make the employees aware of work safety. The activity focuses on educating the staff in respect of using safety equipment. The expert in each field shall be invited to teach the employees. There is a monthly safety check in each section in the factory so that the staff shall be repeatedly warned of work safety with a valuation by giving marks to employees. The employee who gets the highest mark shall be awarded and complimented as a good example for other employees.

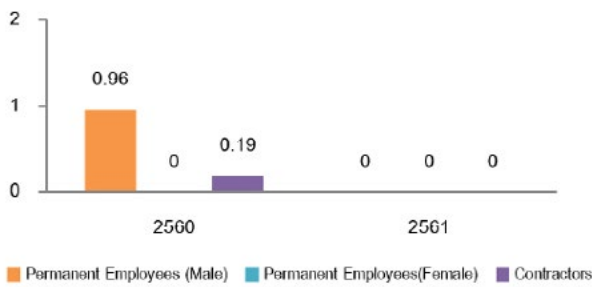
Injury Rate (IR)
(Time)



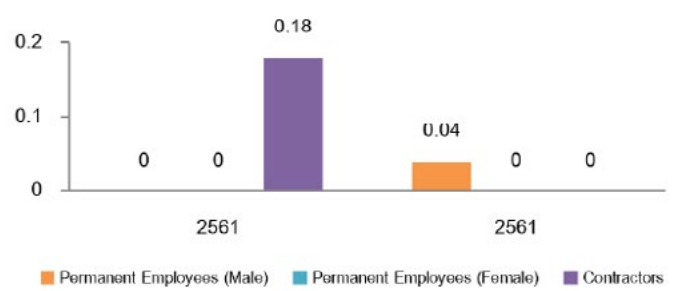
Occupational Diseases Rate (ODR)
(Time)



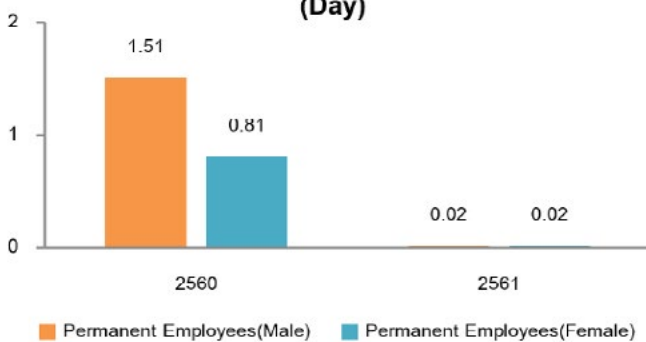
Lost Day Rate (LDR)
(Day)



Fetalities Rate (FR)
(Person)



Absentee Rate (AR)
(Day)



Note

- Accident Frequency Rate is the index to measure accident in the organization which is calculated from the number of persons who incur accident comparing with the standard of 100 employees, working 8 hours a day in 250 days per year which is equivalent to 200,000 man-hour per year

- Information regarding contractors are from two companies – Khon Kaen Sugar Industry PLC (Wangsapung Branch) and Khon Kaen Sugar Power Plant (Wangsapung Branch)

7. Quality and Satisfaction of Employees (64-LA2)

Employee is a starting point to drive business towards success. Therefore, the group of companies adheres for human resource management by promoting employee potential throughout working period including active recruitment for qualified employees ready to help propel the organization to sustainable growth. The group of companies also focuses on management and personnel development to make the group of companies the organizations at the top ranking which people want to work with.

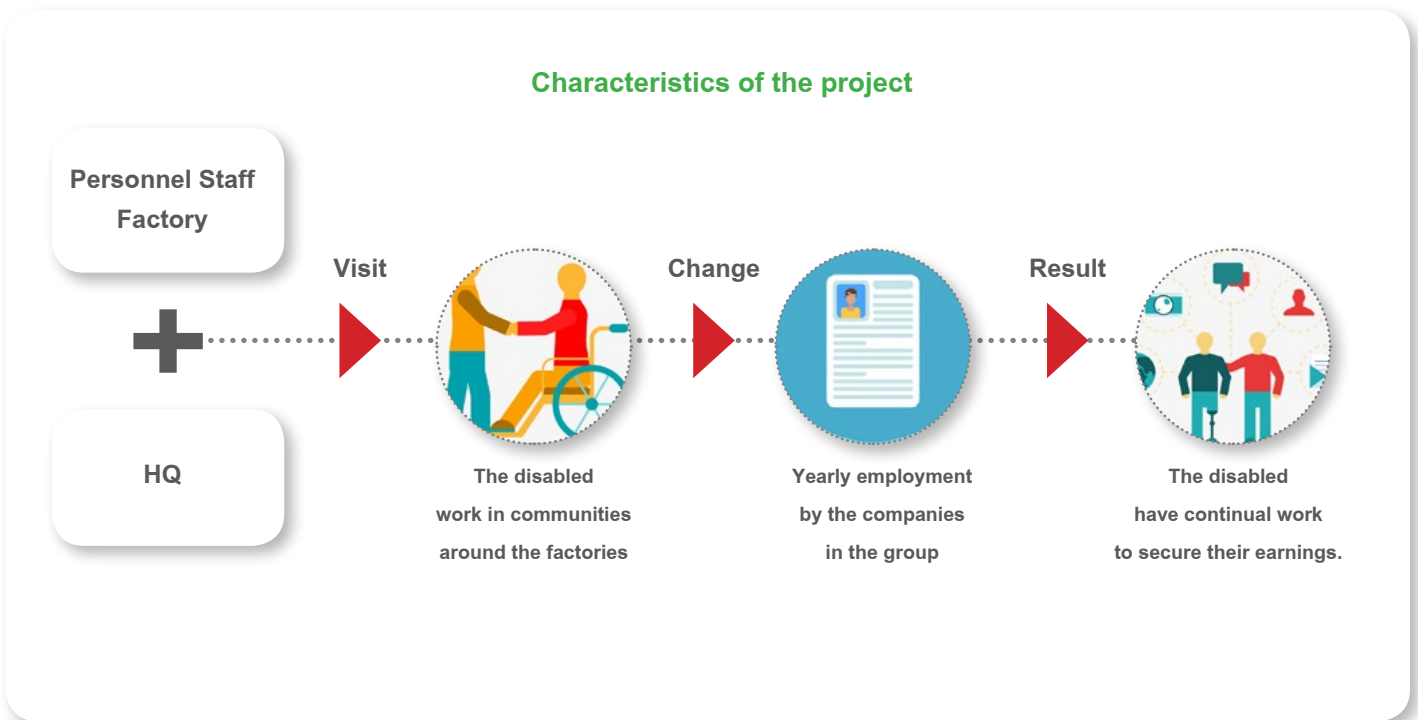
The group of Companies uses recruitment channels to solicit both insiders and outsiders by appropriate testing and interviewing to ensure that the companies would have persons suitable to the jobs on the basis of capability and right qualifications and non-discrimination against race, nationality, tribes, religion, social status, gender, age, disability, political thought and marital status.

In 2018, the Company plans to hire more disabled as employees by increasing the number from 22 employees

to 43 employees. The Company has a memorandum with the Nampong Hospital to hire the disabled to work in the hospital and may assign additional work if they feel convenient to commute to the factory. In addition, the Company cooperates with the Natural Agricultural Center at KSL River Kwai to hire the disabled to work in several learning centers.

The change from fee payment to the Disabled Supporting Fund to direct employment is a way to create human value to the disabled so that they can have their own earning to rely on themselves and live among others with dignity. The adaptation of selection process and potential development to decrease social inequality are deemed a creation of social value that is consistent with the Sufficiency Economy Principles of the late King Rama IX.

It is an opportunity to expand corporate social responsibility in the coming years. In case an employee becomes crippled due to sickness or accident and is not able to do the normal work and dismissed, he could be further supported by doing this yearly work instead. This could be an extension of the project to benefit the members of KSL family.



The Company and all related parties put effort to render policy and implement various practices to help develop the employees' quality of life and, at the same time, to build a better standard of corporate social responsibility.

The group of companies provide welfare and service in addition to those required by law to all levels of employees to promote quality of life and to stabilize their future such as provident fund, life insurance and accident insurance, housing welfare with low interest rate, loans and monetary assistance including the promotion the employees' work-life balance by providing period for leave according to the years of work.

As for right and liberty, the group of companies communicates to employees through intranet so that the employees shall get useful information and updated operation of the companies thoroughly and rapidly. The employees are encouraged to express their opinion or to negotiate various matters and take into account their opinions and suggestions which are useful for the employees and the companies.

Employees of all levels are important to the companies no matter of race, religion, gender. All employees are equal and are treated equally. They are entitled to welfare without discrimination. The promotion is done by a committee which consists of executives from different units to ensure transparency and fairness. Besides, the Company encourages the acquisition of knowledge through internal and external trainings so as to cope the future growth. The Company establishes a provident fund for employees.

The group pays serious attention to the Thai labor standard because the compliance with the standard is the respect to basic human rights and is well accepted by all stakeholders. **The result also benefits the employers, employees and the nation.**

Employers' benefits

1. Goods and services are accepted that they are generated from a source that is reliable and trustworthy as to fair management of labor and social responsibility regarding labor standard
2. Marketing mechanism for competition in both domestic and international markets
3. Good image that fosters creative public relations
4. Support and respect internationally-declared human rights
5. Good relationship between employers and employees

Employees' benefits

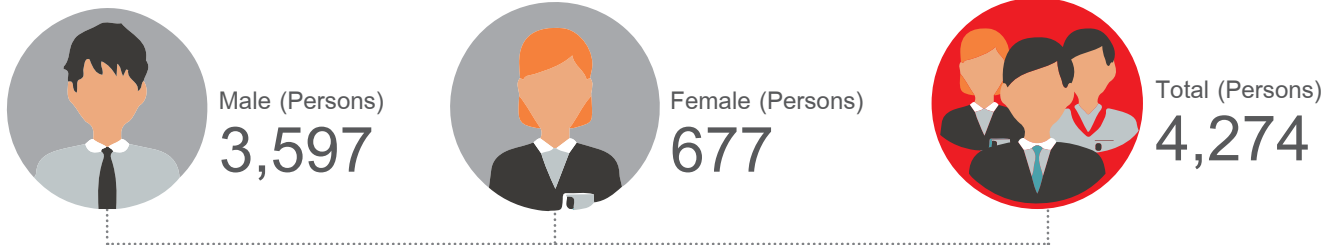
1. Good morale and work security through human right protection
2. Protection of employees' rights not less than that provided by law
3. Freedom to collective bargaining
4. No employment discrimination due to differences in nationality, race, religion, age, gender, attitude and disability
5. Safety, occupational health and good working environment

Nation's benefits

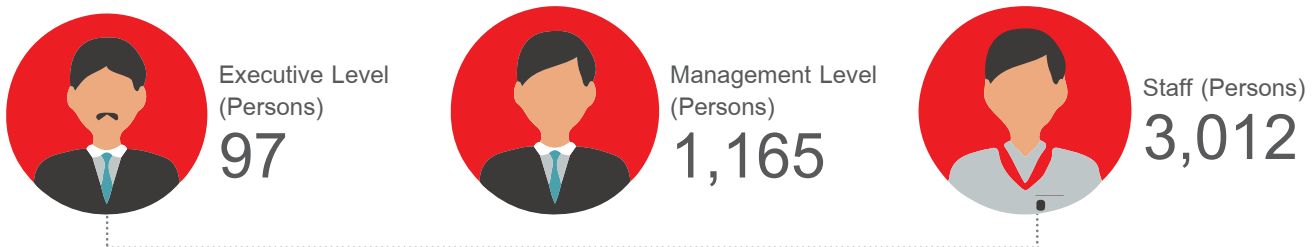
1. Competitive edge to develop economy with equality to integrate with world economy
2. Elevation of the country's image regarding quality of goods and services under standard criteria, fair labor management and corporate social responsibility

The commitment of the Company to maintain its Thai labor standard has been recognized by being awarded Thailand Labor Management Excellence Award in 2017 as it kept maintaining the standard for 10 consecutive years.

Total Employees



Divided by positions



Management and Personnel Development (G4-LA9)

The Company sets target to have personnel trained in line with the directions and strategies of the Company so that the employees have potential and efficiency in handling the work and have opportunity to progress in their career paths. The internal training by internal or external facilitators covers matters which are related to the work as well as ethics. The employees may attend external training or seminars to enhance their knowledge. The Company establishes training plan and budget each year and encourages the transfer of knowledge among employees in the group of companies.

The Company regards that an important part of personnel development is to create courses that are necessary for the employees which consist of mandatory courses and courses for potential development.

Mandatory course is either the course that requires all employees to attend or the course that is specially designed for specific group of employees.

New Employee Orientation

This course provides basic knowledge about sugar cane industry and the Company's history, culture, structure, management system, and products. With this knowledge, new employees can understand the KSL's work environment and

begin to work with their colleague smoothly.

Work Place Safety

This course provides knowledge on workplace safety. It will make employees aware of hazardous areas in the workplace and learn how to work safely and prevent dangerous accidents. The Company also created a committee to ensure health and environmental safety according to the required standard of 2543.

Quality Management System (ISO 9001: 2015)

This course provides relevant employees with knowledge and understanding of the ISO 9001:2015 quality management system. Employees shall learn to master their assigned tasks and responsibilities and follows the required production and quality standard so that customers can have confidence in our products that are managed and produced under internationally accepted standards.

Food Safety System (FSSC 22000)

This course provides relevant employees with knowledge and understanding of Food Safety according to the FSSC 22000 standard. Employees shall learn and plan to prevent food contamination to ensure customer's confidence in our products.

Thai Labor Standard (TLS 8001-2553)

This course is to provide employees with knowledge and understanding of Thai Labor laws and standard such as freedom of expression, non-discrimination practice, respect for human rights, and workplace health and safety regulations.

Training curriculum : Increase Potential with the King's Disciplines

This training project is held at KSL River Kwai Natural Agricultural Center during August to October 2018. The curriculum is designed to develop the potential of employees in doing their work and the leadership by referring to the 28 royal working principles. Also, the employees have the opportunity to learn the Sufficiency Economy Theory of the Late King Bhumiphol Adulayadej for self-dependence. Through the Sufficiency Economy to Employees Project, The employees can spend their out of work time to do some agricultural work to reduce their expense and to increase their family income.

Courses for Potential Development

The Company recognized the importance of continuous improvement of its employees' skills and knowledge and therefore provides training courses to enhance those skills and knowledge so that the Company can increase work effectiveness and efficiency of employees at all level.

Executive Level

The development courses and training for executive level focuses on new management knowledge and techniques so that the executives can set future direction for the Company, make strategic plan to achieve future goals and in time for the rapid changes in the competitive environment. Examples of courses are: Strategic Thinking and Executives, Directors Strategic Workshop, and Risk Management Workshop.

Management Level

The development courses and training for management level emphasizes on general management to make better and more efficient management plan and leadership development for sustainable growth. Examples of courses are: Mini MBA for KSL, HR For Non-HR, The Leader as Coach, Competency for Executive Management, Effective Performance Management System, and Business Continuity Management System.

Supervisor Level

The development courses and training for supervisor level focuses on increasing their personal skill sets, knowledge of the job operation, art of communication, and team work to improve work effectiveness and efficiency as well as to create positive attitude towards the Company. Examples of courses are: Effective Presentation Technique, Negotiation for Results, KSL Excellence Team, and writing courses for reports and for formal correspondence with government agencies and other businesses.

Operation Level

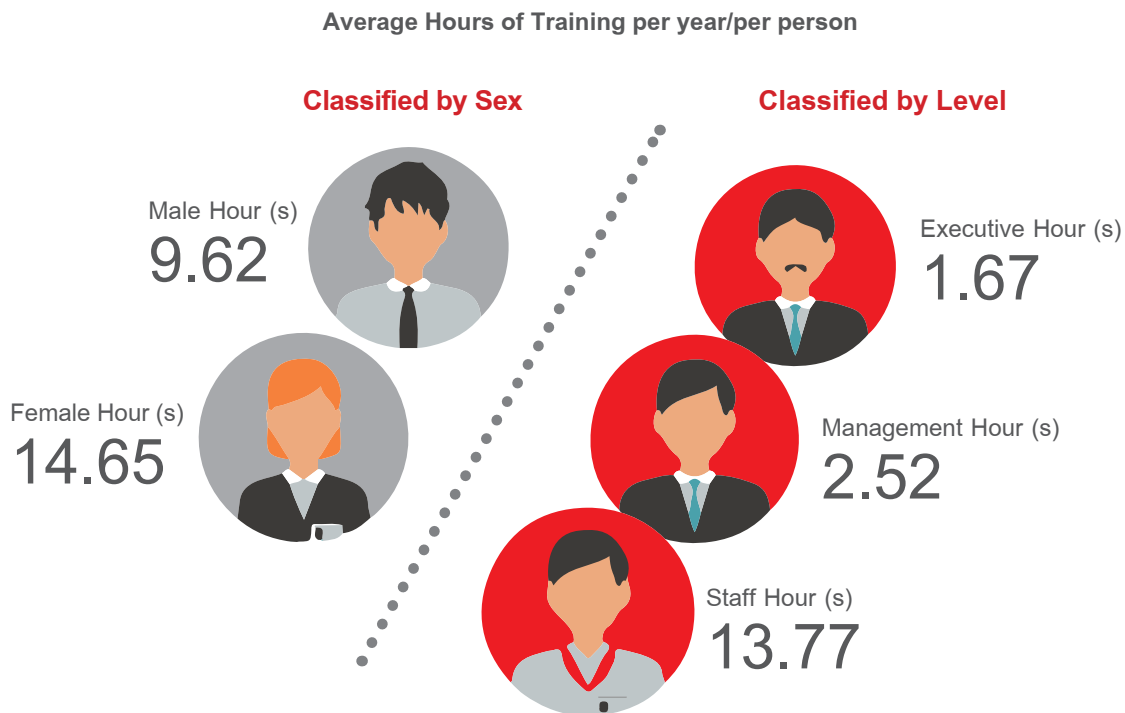
The development courses and training for operation level emphasizes on increasing employee's knowledge of their skills and work responsibilities as well as the tools that can help them increase their efficiency. Examples of courses and activities are: 5 Sor, QCC, Workplace Safety, Anti-Corruption and Anti-Bribery Policy, etc.

One Point Knowledge (OPK) and One Point Lesson (OPL) and One Point Sharing (OPS) Programs

OPK, OPL, and OPS programs are the Company's knowledge management tools. The employees share knowledge in different areas of operations as they learn them through their jobs and outside meetings, conference, and seminars. The written reports submitted by each employee are stored and shared with colleagues within the department

and when relevant, shared with the entire organization. These tools are implemented to encourage learning and sustainable organizational improvement that would help the Company's realize its goals more efficiently.

The Company requires all managers to plan a budget and training courses for employees under their supervision as well as to monitor and to make assessment after each course.



Succession Plan

The Board of Directors is well aware that the prosperity and development of the entity shall depend upon the personnel of capability and conscience. The Board assigns the management to regard the management and development of personnel as an important matter.

The Company properly selects a person to fill an important administrative position of each level to ensure that the Company will have an executive of competence who is suitable to the position and is capable to manage the work smoothly and to replace another person appropriately. The

Board of Directors assigns the Selection and Remuneration Committee collects information and contacts professional institutes to give advice to the succession plan project. The Company has prescribed the succession plan as follows.

1. Identifying important or principal position
2. identifying potential or competence of a principal position
3. analytical process to identify a successor
4. individual development plan

Building corporate culture for growth with sustainability

The group commits to achieve its vision with sustainable growth. Core values of desired characteristics are established and communicated to all employees so that they know, understand and practice continuously with the expectation that the core values shall soon be developed to the corporate culture.

The core values are D-I-S-C, consisting of:

D - Dynamic

which is broadly defined as energetic and prompt to changes for the better. The meaning is elaborated to include the following characters.

- Ability to change and to adapt including to evaluate strategies, plans and work process to cope with the change of surrounding circumstances
- Ability to obtain knowledge in the work and the business, to develop skills and expertise as necessary for the future
- Ability to decide in appropriate time and on sufficient information.

I - Integrity

means, in the broad sense, honesty, keeping one's words and doing the right things. The meaning is elaborated to include the following characters.

- Commitment to honesty, transparency, accountability and promise keeping
- Treating people with equality, non-discrimination and respect to others' dignity
- Adherence to good governance, business ethics and social responsibility
- Punctuality and communication with correct information at the right time with no distortion or concealing the facts that should be disclosed including expression of useful opinions

S – Synergy

means coordination, combination of strength to make multiple impacts. The meaning is elaborated as the following characters.

- Co-thinking, co-working and sharing of knowledge
- Clear communication of duties, responsibility and expectation
- Creative conclusion and recommendations

C- Creativity

is meant to include development and application of new things to reality. The meaning is elaborated as the following characters.

- Development of work methodology, new products or services
- Making decision and implementation subject to acceptable risk level through risk assessment, monitoring the success and failure for further improvement.

KSL Innovation Award 2018

In 2018, the Company continues the KSL Innovation Award Project for the second year with the purpose to promote the C-creativity core value by inviting the personnel to submit their work in competition. The work includes both software and hardware dividing into three levels-conceptual, prototype and commercial usage. The staff submits several projects and pieces of work which are to be evaluated by the committee. The chosen projects shall be awarded and introduced to the executives and colleagues.

To communicate the core values to all employees of the group of companies, the Company appoints KSL Brand Ambassador to perform the task of introducing the meaning of core values for acknowledgement and understanding. The Brand Ambassador cadre also helps organize various activities that induce the understanding and familiarity with the core values in each work place, such as morning talk, signage and standee, in-house voice broadcasting, orientation and training, voting for idols who have characters of D, I, S and C, KYT activities, Safety, Health and Environment Day activities, etc.

Channels for communicating vision and core values

The group of companies appoints the second generation of KSL Brand Ambassador of 26 employees who are assigned to communicate with all the employees throughout various channels of the core values.

The Brand Ambassadors at the head office and the factories use several activities as media to gather the staff to do the activities together and exercise their best effort to make the employees aware of the core values and to encourage them to conduct their behaviors within the meaning of core values. The activities at the sites range from entertainment to academic ones so that the employees are free to participate in the activities they like.

Responsibility towards community and society



The King’s Disciplines towards Leadership Development in 2018 and Living Quality in the Community with the Sufficiency Economy Principles Projects

Meaning

- Sugar cane : The origin of natural energy
- Bundle of cane : Unity
- Cloth with national ag colors : Thainess
- Soil : Restoring life to land
- KSL : Sufficiency to restore life to land

Activities conducted in 2018 for sustainable value by tracing the King’s guidelines.

The conduct of social activities by the group of companies in 2018 bestows to the Sufficiency Economy Principles as guidelines to propel the activities for society, employees, communities around factories, sugar cane farmers and external units of the Natural Agricultural Center at River Kwai and its network. The pattern of activities includes:

Activities	Training	Creating Learning Base in local areas	External Observation	Dissemination of Knowledge to outsiders
Employeess				
- Full time staff	●	●	●	
- The disabled staff	●			●
Communities around factories	●	●	●	●
Sugar cane farmers	●	●	●	●
Suppliers			●	
External entity, e.g. ,Community Development Provincial Office, Tourism and sports Provincial Office, Ministry of Commerce, Natural Agriculture Foundation, Tambon Administration, Ministry of Industry	●		●	●

1. Employees

1.1 Full time staff

- Activities on the King’s Disciplines towards leadership development to increase co-working skills, to adapt to work and living and to increase occupational knowledge for increasing income and reducing expense.
- Occupational support for the employees to increase income and food supply for family e.g., mushroom

planting, animal raising, vegetable planting, etc.

1.2 Disabled staff working at the River Kwai Natural Agricultural Center

- Potential Career Development of the disabled through the learning bases located within the Center e.g., massaging, mushroom planting, artificial flowers, etc.
- Practice to develop the learning bases and deliver the knowledge to communities around factories and to visitors.



2. Communities around factories

- Activities on the living quality development for the community with the Sufficiency Economy Principles so as the community would participate in the dissemination of the King's Disciplines onwards and apply for their living of self and their communities.
- Creation of Sufficiency Economy Principles Learning Base within the community to generate more income to the participating families and to set examples for the visitors to learn from.

3. Sugar cane farmers

- Activities on living quality development for the community with the Sufficiency Economy Principles so as the farmers learn about the reduction and the cancellation of chemicals in agriculture.
- KSL Junior Farmer 2018 Project to train new generation of farmers to continue the sugar cane plantation with modern technology.
- Brother's teaching Project to create new teams of planting support staff to assist the farmers.

These activities are conducted in collaboration with the present farmers and the new generation of farmers with the goal to encourage the farmers to do the mixed agriculture which generate income throughout the year by using modern technology to continue sustainable sugar cane plantation.

4. Suppliers

Participation with suppliers to drive social activities, e.g., sustainable business with Coca-Cola, suppliers' visit to observe the agricultural areas managed by the employees and the KSL Natural Agricultural Center.

5. External Units

- Acceptance of the observation visitors from several entities, e.g., Tambon Administration, Tourism and Sports Provincial Office, Community Development Provincial Office, etc. to disseminate the King's Disciplines for awareness and application to develop the locality.
- Dissemination of knowledge to outsiders pursuant to the coordination of various entities, e.g, Natural Agricultural Foundation, the Department of Domestic Trade, Ministry of Commerce, Ministry of Industry, etc.



The King's Disciplines towards Leadership Development in 2018 and Living Quality in the Community with the Sufficiency Economy Principles Projects

The King's Disciplines towards Leadership Development in 2018 Project is the training activity that KSL Group organizes annually in order to deliver the King's Disciplines and the Sufficiency Economy Principles to the employees and the communities around factories so that they can adapt the earned knowledge for their work and daily life. In 2018, the number of 324 employees and 100 villagers from communities are trained.

After the training session, the factory's Social Activity Unit is assigned to monitor the result and to encourage other employees and villagers to attend the project. Moreover, the work includes the promotion of additional career and the conduct of activities in the communities around factories. As an example, the Bo-Ploy factory allocates a piece of land for employees to do agriculture in the living area that makes more income to the employees. As to the community, the families that are evaluated suitable for being Sufficiency Economy Learning Center and household self-reliance are selected.

The site visit to evaluate the training result and to solicit new trainees are the vital part of the project, otherwise the continuation of the project would be a deadlock.





Community development staff working the River Kwai Natural Agricultural Center

While the law requires a factory to hire the disabled at the proportion of 1:1000. KSL Group deems more appropriate the career stability among the disabled by supporting the disabled to receive regular salary by hiring 8 disabled to work regularly as community development staff at the River Kwai Natural Agricultural Center. These staff undertake regular job that enable them to take care of their families and obtain useful knowledge for the career after the termination of employment. The disabled staff gets opportunity to deliver and share knowledge with the community and to observe the activities of the Center as well.

Sufficiency Economy to Community

KSL-BP

- Bann Nong Teng
- Bann Bo Hieng
- Bann Lum Rang
- Bann Chong Charoen
- Bann Huay Krachao

KSL-TK

- Bann Saen Tor
- Bann Wi Neaw
- Bann Samnak Yen
- Bann Mor Thao
- Bann Nong Mi Kaen
- Potharam Natural Agricultural Center

KSL-PN

- Bann Hua Chang
- Bann Nong Hua Chang
- Bann Kud Muang
- Bann Nong Hoi
- Pothivijalai College
- Bann Nern Si Sufficiency Economy Learning Center

KSL-WP

- Bann Sum Charoen
- Bann Noan Sawang
- Rai Wisetya
- Pa Rak Nam Center
- Suan Rung Thip
- Bann Dong Larn
- Bann Mueng Baneg
- Bann Nong Wor School

KSL-NP

- Rak Din Rak Nam Center
- Bann Koke Soong
- Bann Sanam Bin
- Bann Muang Wan
- Bann Nong Saeng
- Bann Seaw
- Bann Kham Bon
- Bann Sang Sang
- Bann Dong Yen
- Bann Soke Sang
- Wat Mahachai
- Bann Koke Soong Prachasan School

List of Sufficiency Economy Learning for Community Center

The activities of the Sufficiency Economy Learning Center for communities around factories in 2018 are driven by 37 Learning bases of KSL River Kwai Natural Agricultural Center as follows.

New Krung Thai Sugar Factory Co., Ltd.- 5 learning bases

Tamaka Sugar Industry Co., Ltd.- 6 learning bases

New Kwang Soon Lee Sugar Factory Co., Ltd. – 6 learning bases

Khon Kaen Sugar Industry PLC (Wang Sapung Branch) – 8 learning bases

Khon Kaen Sugar Industry PLC (Nam Pong Branch) – 12 learning bases





Sufficiency Economy Learning Center- Bann Samnak Yen

Sufficiency Economy Learning Center- Bann Samnak Yen locating at Moo 1, Tambon Pra Tan, Tamaka District, Kanchanaburi managed by Khun Namruthai, has been supported by the group of Companies for 3 consecutive years. In 2018, the center together with the Social Activity Unit and KSL River Kwai Natural Agricultural Center develops the area for producing organic rice. The first generation of rice, Khao Hom Pathum, from 5 rai - rice field produces 2.5 tons. The second generation, Khao Hom Mali, produces 3 tons. The rice field is nurtured by natural fertilizer from buffaloes, wild boars, ducks and hens raised in the area nearby.

The community members divide the rice into three parts, namely, 1) sharing among the participating members 2) selling organic rice to the community members at reasonable price 3) selling to the Natural Agricultural Center to resell to the health-mindedness customers.

As such, the community can well rely on itself both on the production and marketing and can drive the activities concerned towards sustainability.



School Model for Sufficiency Economy

The activities to strengthen knowledge on self-reliance in accordance with the sufficiency economy principles are done in elementary and higher level at schools in Kanchanaburi Province, i.e., Wat Tha Krathum School, Wat Mai Charoen Phol School at Tambon Tamaka and BoPloy Ratchadapisek School at BoPloy District. The activities focus on the disciplines, responsibility, unity, sharing behavior and self-reliance pursuant to the sufficiency economy principles initiated by King Bhumibol Adulyadej. The learning bases include the following training.

1. **Sufficiency accounting**, where the children learn to record income and expense.
2. **Sufficiency food**, where the children learn to grow edible vegetables and to sell the produce.
3. **Charcoal maker**, where the children are taught to make cooking charcoals with the wood collected in the area and make smoke vinegar as insect repellent.
4. **Soil keeper**, where the children are taught to make bio- fertilizer to use in their schools.
5. **Saving expense**, where the children are taught to make things that can reduce expense to use in schools and their houses.
6. **Mushroom planters**, where the children are taught to plant mushroom which are to be an ingredient for their lunch.

The knowledge gained by the students is not that from the books, but from their actual practice and problem solving which are useful for self-reliance and future career.





Usage of residual matters from factory

1. 200 litre barrel is used as charcoal burner. The collected branches of trees could be burnt to make cooking charcoals and the by-product of smoke vinegar to repel insects, to reduce bad smell in animal cages and to water the plants to increase sweetness in fruits.

2. Molasse from sugar manufacturing process to make bio-fertilizer. The self-made fertilizer ensures the safety when used to grow vegetables and plants.



3. Filter cake from sugar manufacturing process is a vital part in natural fertilizer as it is rich of useful elements for plants, e.g., nitrogen, phosphoric acid and potash.





Sustainability Project with Coca-Cola

The year 2018 is the second year of the cooperation between the Company and Coca-Cola (Thailand) Co., Ltd. which is conducted in Tamaka Sugar Industry Co., Ltd and New Krung Thai Sugar Factory Co., Ltd. The factory staff and the female cane farmers collect financial data and choose the winner. The result of the project is the inspiration to do the income-expense recording and extra earning.

Junior Farmer 2018 Project

The activity is made at the River Kwai Natural Agricultural Center in Kanchanaburi during 12-14 September 2018. There are 47 male and female participants of 20-35 years of age who are the new generation of sugar cane farmers attending the event along with the factory sugar cane promotion staff. This activity gets cooperation from Thai Yamaha Motor Co., Ltd and Crop Teach Asia Co., Ltd. which conveys knowledge about modern technology for sugar cane plantation to increase productivity and decrease cost. The activity also encourages the application of sufficiency economy principles to the living and the cane planting career.





Brother's teaching Project

This project is aimed to the new sugar cane support staff. The veteran staff convey their knowledge and experience regarding the care-taking of sugar cane, self-reliance pursuant to sufficiency economy principles, particularly the new theory of agriculture so that the staff can deliver the knowledge to the farmers directly and enable them to gain more income, e.g.,

Daily income > by collecting eggs and vegetable

Weekly income > by raising frogs and catfish

Monthly income > by selling pigs and natural fertilizer

Yearly income > by producing and selling sugar cane and rice as yearlong income and by reducing expense by growing vegetables, making natural fertilizer, making household appliances.

These activities would help easing living trouble when price of agricultural produce drops drastically and help create sustainability in the long run. An example of success in this aspect is Bann Chong Charoen community, located at Moo 15, Tambon Lum Rang, BoPloy, Kanchanaburi.





Joint activities with external entity

Besides conducting social activities with farmers and community around factory, the group of companies coordinates with other entities to convey knowledge to schools, communities and interested persons through training and observation tour at the learning bases within the center. The following are the examples of such cooperation.

Representatives from KSL River Kwai Natural Agricultural Center are invited by the Road To Success Project of the Department of Business Development, Ministry of Commerce to teach students in Patrol Police School at Bann Ton Muang regarding small fertilizer plant and bio-fertilizer making.

The observation tour and training for community and interested person through 18 learning bases, with the coordination of the Community Development Provincial Office and Tambon Administration, with the expectation that the trainees can implement the knowledge to develop their locality.

Activities conducted with the Natural Agricultural Network and Natural Agricultural Foundation so as to affirm the continuation of the Sufficiency Economy Principles initiated by the late King Bhumibol Adulyadej.



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