WHA
Utilities &
Power

SMART UTILITIES & POWER

SUSTAINABILITY **REPORT 2020**

WHA UTILITIES AND POWER PUBLIC COMPANY LIMITED

Content

General Disclosure

Governance/ Economic Dimension

Social Dimension

Environment Dimension

General Disclosure

- CEO Message
- Awards and Memberships
- About This Report
- Getting to Know WHAUP
- Sustainability Development at WHAUP
- Sustainability Material Issues and Impact Boundary
- Stakeholders Engagement

CEO Message

Due to the intensification of anthropogenic activities and natural events, the world is experiencing many environmental concerns, ranging from climate change to natural resources scarcity. As a result, there is an alarming need for change towards sustainability. Our society is currently facing a drastic transition, substantially, the shift in global trends with major emphasize on digital, innovation and energy transformations, as well as natural resources conservation. The nature of WHA Utilities & Power Public Company Limited (WHAUP)'s integrated services include water procurement, production, and distribution, wastewater treatment services, and power generation and distribution to customers; thus WHAUP has always been competitively engaging with these global trends. WHAUP has been contributing to the energy transformation by promoting renewable energy consumption and conserving natural resources through recycling water at its wastewater treatment services. Moreover, in 2021, WHAUP aims to bring technology to develop innovative solutions for renewable energy and new utilities services, while exploring merger and acquisition opportunities in order to maintain its sustainable business growth. The Company plans to make additional investments in Thailand and internationally to strengthen sustainable growth, and sets an investment budget for power and utilities business, during 2021 to 2025, at 12 billion Baht.

Following its mission and vision to become “Asia’s Leader in Utilities and Power Businesses” by providing total solutions to partners with good corporate governance in an environmentally and socially friendly manner, WHAUP has placed great priority on its commitment to align its business’s targets, strategy, actions, operations and management approach with the sustainable development framework and principles. With the aim to create utmost positive influences, while posing the least negative impacts to the surrounding communities and the society, WHAUP consistently pursues its environmental, social and governance commitments, while maintaining continuous engagement with its stakeholders to ensure that all of their expectations and concerns are effectively addressed. This signifies that WHAUP operates with consideration for conservation of natural resource, development and retention of its workforce, progression in digitalization and innovation, and establishment of a strong governance foundation.

Following the Company’s pursuit and dedication towards sustainability, WHAUP supports WHA Group’s sustainability strategy with the long term sustainability goals in 2020. The strategy is built upon the nine material issues on governance, social and environmental topics that correspond with the stakeholders’ expectations as well as the risks and opportunities arising from global trends.

WHAUP acknowledges that in order to achieve sustainable business growth, the Company must first strengthen its governance foundation. Hence, WHAUP commits to conduct its business ethically, transparently, and responsibly, and harness appropriate digital infrastructures and innovations to encompass ‘good corporate governance’ within the Company. WHAUP recognizes that stakeholder engagement is fundamental in order to fulfill this commitment. The stakeholders’ interests, expectations and concerns are very important to WHAUP as it influences the Company’s directions, strategy and influences its decision-making process. As a result, in 2020, the Company has conducted a stakeholder identification and prioritization to ensure that proper engagement approaches and channels are in-placed for all stakeholders. Concurrently, WHAUP is continuously improving its risk management system, which is paramount in order to achieve good governance. The risk management is also extended to its suppliers in order to further its commitment for stakeholder engagement.

Outstandingly, WHAUP’s achievement for Thailand’s Largest Solar Carpark at SAIC MOTOR-CP Company Limited, MG Manufacturing Plant, illustrates its environmental responsibility by contributing to the reduction of greenhouse gas emission and promoting the production and consumption of energy from renewable source for its customers. Moreover, with its on-going efforts to provide an all-round integrated solar rooftop services, the Company has gained trust from industrial customers across the country proven by the contracted solar capacity with customers of 51 MW as of 2020.

Likewise, WHAUP has been progressingly and continuously improving its highly successful wastewater reclamation and wastewater treatment projects. In 2020, WHAUP invested in the expansion of reclaimed water capacity at WHA Eastern Industrial Estate (Map Ta Phut, Rayong Province), to 9.1 million cubic meters per year, making it Thailand’s biggest reclamation water plant. WHAUP also implements wastewater treatment projects as part of its corporate social responsibility initiatives with the constructed wetland, an eco-friendly, cost-effective and low maintenance approach to treat water. The latest project being developed is the constructed wetland with a treatment capacity of 1,200 m^3 of wastewater/day at EECi, Rayong province. Moreover, there is a constructed wetland project with the treatment capacity of 400 m^3 of wastewater/day developed under the concept of ‘Clean Water for Planet’ to treat water in natural resources that are utilized by the local communities. This project exemplifies WHAUP’s social responsibility by providing local communities with access to clean water, while the facility is also opened to university students, and offers internship and training programs.

Nonetheless, WHAUP’s ambition towards environmental and social contributions lead to its many investments on value-added products such as demineralized water, premium clarified water and wastewater reclamation, both within and outside WHA Group’s industrial estates, which have illustrated tremendous positive long-term impacts, spanning from greenhouse gas reduction to providing clean water resources for surrounding communities. WHAUP believes that these new innovations and technological advancements could create opportunities for sustainable growth, while helping to comply with the new government-related regulations and all in all, path ways for the Company to fulfill its environmental and social commitments.

Finally, WHAUP would like to thank all stakeholders who have always supported the Company and have been a vital driving force towards our sustainable development goals.

WHAUP hopes to make headways towards achieving sustainable growth by adhering to the balanced business principle, contributing with its social and environmental responsibilities in order to create shared values in the society. The Company aims to become a shining example in its field as a leader in sustainability. Ultimately, WHAUP hopes to inspire others in similar fields or related industries to follow its footsteps, and becoming a helping hand for Thailand’s achievement and contribution to the global sustainable development goals.

Dr. Niphon Bundechanan
Chief Executive Officer

Awards and Memberships

"Thailand Sustainability Investment 2020"

At the "SET Awards 2020" ceremony, WHAUP received the Thailand Sustainability Investment recognition in the category of resources industry. WHAUP was recognized due to its ongoing commitments toward sustainable growth, business ethics and corporate governance. Stock Exchange of Thailand (SET) listed WHAUP as an outstanding company that reflects excellently on their environmental, social and corporate governance (ESG) aspects and generate stable and long-term return of investments.

"Excellent CG Award"

WHAUP received a five star "Excellent CG Scoring" for the second year in a row from Thai Institute of Directors (IOD) and SET. This is rewarded to WHAUP for its effort towards sustainable business growth while also contributing to the environmental, social and economic/governance aspects and its stakeholders.

FIABCI -Thai Prix D' Excellence Award 2020

WHAUP received the FIABCI-Thai Prix d' Excellence Award 2020 in the Environmental (Rehabilitation/ Conservation) Category for its Clean Water for Planet Project. The project initiates effective and sustainable wastewater management and treatment facility beneficial to the community surrounding WHA industrial estates.

"Quality Persons of the Year 2020"

In 2020, Dr. Niphon Bundechanan, CEO of WHAUP, received the "Quality Persons of the Year" award from the Foundation of Science and Technology Council of Thailand (FSTT) in the energy and utilities business category.

Conducting a business in a sustainable manner is a crucial part of WHAUP's organizational culture. With the constantly strengthening and extensive networks and partnerships, WHAUP is able to expose themselves to new opportunities and achieve new goals. Nonetheless, a key contribution that allows WHAUP to demonstrate its commitments to conducting business with integrity and transparency is its certified membership for Thailand Private Sector Collective Action Coalition against Corruption (CAC) that was given to WHAUP in November 2019. Furthermore, WHAUP, also, owes its success to the associations in which they collaborate with.

Membership of Organization or Association
Thai Photovoltaic Industries Association: TPVA Thailand
Water and Environment Institute for Sustainability: WEIS
The Federation of Thai Industries
Thai Industrial Estate and Strategic Partner Association

About this Report

WHA Utilities and Power Public Company Limited (WHAUP) published an annual sustainability report, with the first published report in 2019. The aim of the sustainability report is to disclose and communicate the Company's management approach to all of its stakeholders, covering its sustainable practices and performances in terms of governance, social and environment. This report is WHAUP's second sustainability report which covers the reporting period from 1st January to 31st December 2020.

WHAUP's sustainability report has been prepared in accordance with Global Reporting Initiatives (GRI) Standards: Core option. WHAUP has, also, adopted United Nations Sustainable Development Goals (UN SDGs) as a framework for the Company's progression and performance reporting. The boundary of this report discloses information for all WHAUP's operations and its subsidiaries in Thailand, and that the Company holds greater than 50 percent of the total share and has management control. In 2020, WHAUP improved the comprehensiveness of its materiality assessment in which 20 material topics were identified, similar and some renamed compared against those disclosed in the previous report. Responsible investment, stakeholder engagement, air emission and data security are the new material topics covered in this report.

This report did not receive external party verification, but the contents and data were reviewed and approved by top executives from relevant functions to ensure its accuracy and completeness.

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Getting to Know WHAUP

VISION

To be Asia's leader in utilities and power businesses providing total solutions to partners with good corporate governance as well as environmentally and socially friendly operations.

GOALS

The Company aims to be a leader in integrated utility and power businesses and to operate in compliance with the principles of good corporate governance with responsibility for the community, society and the environment. It also plans to expand its customer base in the segments of utilities and power services, both domestically and in the South East Asia countries particularly Cambodia, Laos, Myanmar and Vietnam (the CLMV countries) and expand to related businesses in order to widen its range of products and services.

MISSION

1. To develop world class utilities and power solutions fitting customers' needs.
2. To vertically integrate solutions in utilities and power businesses and expand other market segment to increase products and services in Thailand and other Southeast Asia Countries (CLMV Countries).
3. To continuously develop human resources competencies.
4. To nurture an innovative culture in the organization.
5. To add value to communities and the environment with good corporate governance and sustainable development strategies.

STRATEGY

- Developing utilities and power businesses that have predictable growing revenue and superior profit opportunities in order to optimize shareholders' value.
- Leveraging complementary management expertise, customer relationship, infrastructure and environmental competence to expand opportunities in utilities and power businesses.
- Utilizing sound human and financial resources selectively for competing investment opportunities.
- Contributing positively to neighbours, society and stakeholders with sustainable programs in education, community and environment.

VALUES & CULTURE

Advance

To be initiative and proactively work to inspire, create, or adjust practical concept, means, or be innovative in order to fulfill customers' requirement and organizational goal.

Champion

To achieve success, which results in business excellence.

Resourceful

To build relationship with customers as a consultant and provide professional advice.

Partnership

To reinforce lasting relationship and build trust as a business alliance with customers and partners, and reinforce internal favorable relationship in order to attain the organizational goal together.

Integrity

To cultivate and develop trust and confidence from customers with transparent working culture, adhere to promise, sincerity, diligent, ethical and socially responsible.

WHAUP was established on June 30, 2008. It is a subsidiary company of WHA Corporations Public Company Limited ('WHA Group') that develops world-class utilities and power solutions for both industrial and non-industrial customers and partners. The Company's core business relates to the: (i) utilities business, i.e. procurement and distribution of raw water, production and distribution of industrial water and providing wastewater treatment services to manufacturers and operators in industrial estates and industrial lands; and (ii) power business through its own operation and through investments in power generation businesses, both domestically and abroad. To pursue WHAUP's business ambition in becoming "Your Ultimate Solution Partner in Utilities & Power with Environmental Care", the Company continuously improves and expands both its utility and power businesses, to ensure that it excels in the competitive market and with environmental care. The Company strictly abides by the regional regulations prescribed under the Ministry of Industry, Ministry of Labor, Industrial Estate Authority of Thailand (IEAT), Stock Exchange of Thailand, Ministry of Natural Resources and Environment as well as internal standards such as the UN SDGs. In 2017, WHAUP was listed on the Stock Exchange of Thailand (SET).

WHAUP UTILITIES

WHAUP serves manufacturers and operators, both within and operating outside, WHA Group's industrial estates and industrial lands across Thailand and Vietnam. The products and services offered are raw water, industrial water (process water, clarified water, premium clarified water and demineralized water) production and distribution and wastewater treatment services. The Company's aggregated maximum industrial water production capacity in all industrial estates and industrial lands is 366,776 m^3 per day, and maximum wastewater treatment capacity of 132,456 m^3 per day.

Industrial Water

Industrial water produced and distributed by WHAUP can be divided under 4 categories.

- Process water is industrial water that has undergone the processes of sedimentation, filtration and chlorination for disinfection. The final product is used in the production process in industrial plants in general. WHAUP's core customers include those in the automotive industry (e.g. automotive assembly plants and auto part manufacturing plants), food industry and electronics industry.
- Clarified water is produced through a similar process as process water, but a lower concentration of chlorine is used during the chlorination process. This enables the clarified water to contain less concentration of chlorine when distributed to customers' use, thus reduces the likelihood and severity of chlorinated corrosion to machinery and equipment. This product is highly used by customers in the heavy industrial sectors, such as petrochemical business.
- Premium clarified water is the clarified water produced using the membrane technology (Reverse Osmosis) and is high in quality, compared to clarified water. In 2020, WHAUP has started and became the first distributer of Premium Clarified Water at WHA Eastern Seaboard Industrial Estate (WHA ESIE) in Rayong province, Thailand.

- Demineralized water is highly purified water used in by customers in a few industries such as power plants, petrochemical, electronics industries.

Wastewater Treatment

- WHAUP provides water solutions to customers by offering wastewater pre-treatment services or wastewater reclamation on customers' operational premises. Service types range from build-to-operate, operation and maintenance, and engineer-procure-construct to match each customer's needs.
- WHAUP offers a central wastewater treatment service to customers operating within WHA Group's industrial estates. Wastewater from customers are gathered at the central wastewater treatment facility and treated until the quality complies with relevant standards before discharging into natural water sources or recycled into the water production process.

POWER Business

Electricity Generation Capacity

WHAUP has partnered with leading Independent Power Producers (IPP) in three commercially operational power plants both in Thailand and internationally. The IPP plants, including Gheco-One Plant, Glow IPP Plant and Houay Ho Power, generate a total power capacity of 1,525 MW, equivalent to 286 MW according to shareholding equity. The following table portrays the summary of IPP business power plants.

Power Plant	Location	Type of Energy	Category of Plant	Equity Holding (%)	Contracted Generating Capacity	Generating Capacity in proportion to WHAUP's equity	Commercial Operation Date
Commercially Operational Power Plants							
Gheco-One	Map Ta Phut Industrial Estate	Coal-Fired Boiler Power Plant	IPP	35.00%	660 MW	231 MW	August 2012
Glow IPP	WHA CIE 1	Gas-Fired Power Plant	IPP	5.00%	713 MW	36 MW	January 2003
Houay Ho Power	Laos	Hydro Power Plant	IPP	12.75%	152 MW	19 MW	September 1999
		Total			1,525 MW	286 MW	-

In addition, WHAUP has its own operating power plants in solar energy projects and has partnered with Gulf Group, B.Grimm Power Group, Gulf MP Company Limited for eight Small Power Producers (SPP). For eight Very Small Power Producers (VSPP), WHAUP has partnered with Gunkul Group, Gulf Group and GLOW together with SUEZ. The total power capacity generated by existing and developing projects represent a total capacity of 2,630.4 MW, equivalent to 601.4 MW equity. Further descriptions of the commercially operating power plants in which WHAUP has invested in are described in the Company's Annual Report 2020.

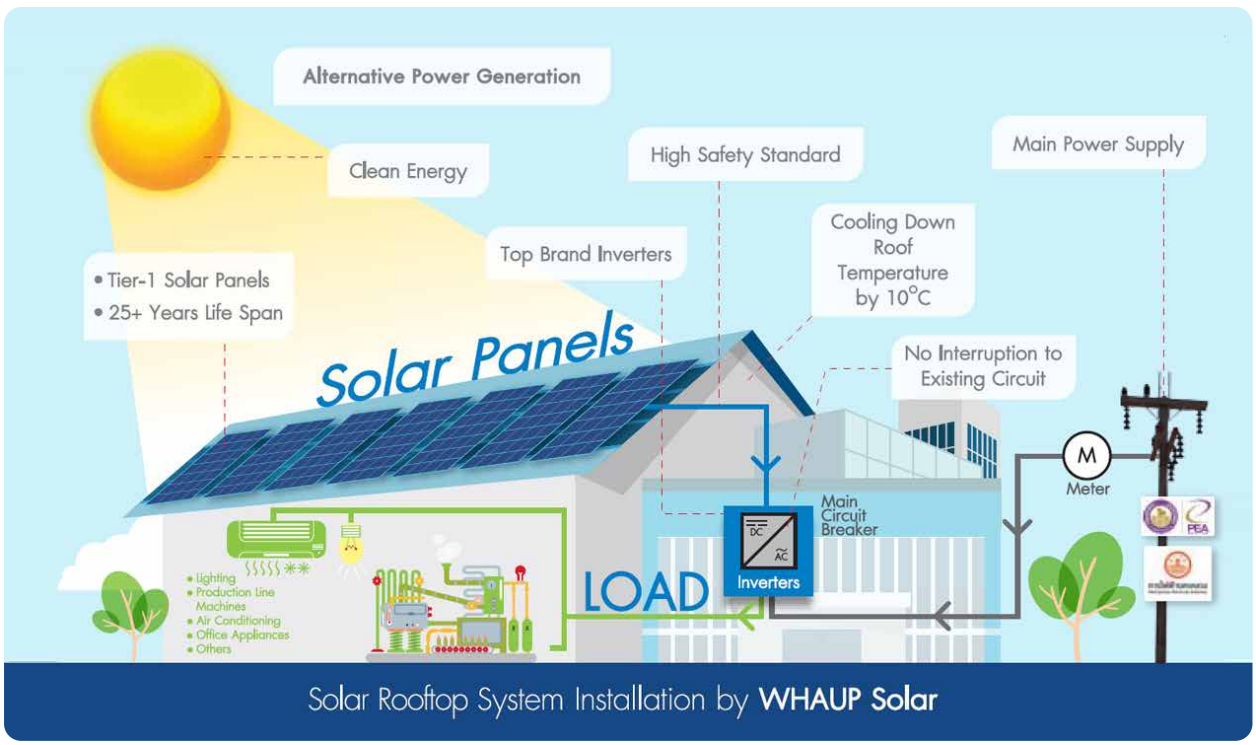
Power Plant	Location	Type of Energy	Category of Plant	Equity Holding (%)	Contracted Generating Capacity	Generating Capacity in proportion to WHAUP's equity	Commercial Operation Date
Commercially operating power plants that WHAUP has investment							
Joint Venture with the Gulf Group							
Gulf JP NLL	WHA RIL	Gas-fired cogeneration	SPP	25.01%	Power 123 MW Steam 8 TPH Chilled Water 4,600 RT	31 MW 2 TPH 1,150 RT	May 2013
Gulf Solar KKS	WHA LP1	Solar power	VSPP	25.01%	Power 0.25 MW	0.06 MW	December 2014
Gulf Solar BV	WHA CIE 1	Solar power	VSPP	25.01%	Power 0.13 MW	0.03 MW	June 2014
Gulf Solar TS1	WHA ESIE 1	Solar power	VSPP	25.01%	Power 0.13 MW	0.03 MW	August 2014
Gulf Solar TS2	ESIE	Solar power	VSPP	25.01%	Power 0.09 MW	0.02 MW	January 2015
Joint Venture with Gunkul Group							
WHA Gunkul Green Solar Roof 17	WHA Mega Logistics Centre, Bangna-Trad KM.18	Solar power	VSPP	74.99%	Power 1.00 MW	0.73 MW	July 2014
WHA Gunkul Green Solar Roof 3	WHA Mega Logistics Centre, Bangna-Trad KM.18	Solar power	VSPP	74.99%	Power 0.83 MW	0.62 MW	April 2014
WHA Gunkul Green Solar Roof 6	WHA Mega Logistics Centre, Bangna-Trad KM.18	Solar power	VSPP	74.99%	Power 0.83 MW	0.62 MW	April 2014
WHA Gunkul Green Solar Roof 1	WHA Mega Logistics Centre, Bangna-Trad KM.18	Solar power	VSPP	74.99%	Power 0.64 MW	0.48 MW	April 2014
Joint Venture with B.Grimm Power Group							
BPWHA-1	WHA CIE 1	Gas-fired cogeneration	SPP	25.01%	Power 130 MW Steam 30 TPH	33 MW 8 TPH	November 2016
Joint Venture with Gulf MP Company Limited							
Gulf VTP	ESIE	Gas-fired cogeneration	SPP	25.01%	Power 137 MW Steam 20 TPH	34 MW 5 TPH	May 2017
Gulf TS1	ESIE	Gas-fired cogeneration	SPP	25.01%	Power 134 MW Steam 30 TPH	34 MW 8 TPH	June 2017
Gulf TS2	ESIE	Gas-fired cogeneration	SPP	25.01%	Power 134 MW Steam 30 TPH	34 MW 8 TPH	September 2017
Gulf TS3	WHA ESIE 1	Gas-fired cogeneration	SPP	25.01%	Power 130 MW Steam 25 TPH	32 MW 6 TPH	November 2017
Gulf TS4	WHA ESIE 1	Gas-fired cogeneration	SPP	25.01%	Power 130 MW Steam 25 TPH	32 MW 6 TPH	January 2018
Gulf NLL2	WHA RIL	Gas-fired cogeneration	SPP	25.01%	Power 127 MW Steam 10 TPH	32 MW 3 TPH	January 2019

Power Plant	Location	Type of Energy	Category of Plant	Equity Holding (%)	Contracted Generating Capacity	Generating Capacity in proportion to WHAUP's equity	Commercial Operation Date
Joint Venture with GLOW and SUEZ							
CCE	WHA CIE 1	Waste-to-Energy	VSPP	33.33%	Power 8.6 MW	2.9 MW	November 2019
Commercially operating power plants by WHAUP group							
Solar power plants	-	Solar Power	Private PPA	100%	Power 36.9 MW	36.9 MW	May 2018 - December 2020
Total (Consisted of : Commercially operating power plants in term of JV* and WHAUP group)					Power 1,094 MW	304 MW	
					Steam 148 TPH	38 TPH	
					Chilled Water 4,600 RT	1,150 RT	
Power plant(s) under construction by WHAUP group							
Solar power plants	-	Solar Power	Private PPA	100%	Power 11.4 MW	11.4 MW	Q1'2021 — Q3'2021
Total					Power 11.4 MW	11.4 MW	-

Note* : Exclude IPP

Solar Rooftop Energy

WHAUP has installed and operated solar power systems not only on rooftops of WHA Group's warehouses and factories but also on rooftops of others; the Company has been gearing forward on this environmentally friendly platform to all industrial customers. With the Company's extensive experience, WHAUP offers an all-in service package, with ZERO investment and maintenance cost, allowing customers to enjoy lower electricity costs while also helping to reduce carbon dioxide levels in the atmosphere. The all-in solar rooftop service package includes design, permitting, installation, and long-term operation and maintenance at no upfront cost to customers. By the end of 2020, WHAUP currently owns and operates rooftop projects, which altogether supplied more than 21,182 MWh of solar electricity (only inclusive of rooftop projects that are owned by WHAUP) and contributed to approximately 10,589 tCO_2e reduction.



Waste to Energy

WHAUP, along with Glow Energy Public Company Limited and SUEZ, invested in approximately 1.8 billion Baht on an industrial waste-to-energy project known as Chonburi Clean Energy (CCE). CCE is located within WHA Chonburi Industrial Estate 1 (WHA CIE 1) in Chonburi province, Thailand. WHAUP's equity holding accounts for 33.33%. CCE commenced its operation in November 2019. The power plant has an installed power generating capacity of 8.6 MW electricity output.

Natural Gas Distribution Projects

WHA Natural Gas Distribution Projects (WHA NDGPs) is a collaboration among leading energy companies - WHAUP, Gulf Energy Development Public Company Limited, and MITG (Thailand) Co., Ltd., under the joint venture company named GULF WHA MT Natural Gas Distribution Co., Ltd. (Gulf WHA MT). WHAUP's equity holding accounts for 35%. Natural gas is clean energy with reasonable price and it is the primary energy for industrial use now and in the future, replacing fuel oil and diesel. In addition, the natural gas distribution service can help reduce the road transport risk, reduce traffic in the area, and is very safe to transport. Moreover, it also enhances the stability of customer's energy consumption since WHAUP's natural gas pipeline system is connected with PTT's main natural gas pipeline system.

- Commercially operated since December 2018, WHANGD2 is the first natural gas distribution project set up in the industrial estate. With distribution capability of 2,000,000 MMBTU per year, WHANGD2 project is designed to serve the natural gas demand of manufactures in WHA Eastern Seaboard Industrial Estate 2 (WHA ESIE 2), Sriracha, Chonburi province, in the Eastern Economic Corridor (EEC).

- Gulf WHA MT also launched the natural gas distribution services in WHA Eastern Seaboard Industrial Estate 4 (WHANGD 4), Pluank Daeng District, Rayong province. This new project, which has its capacity to distribute natural gas up to 2,000,000 MMBTU per year, will continuously serve energy demand of industries in WHA Group's industrial estates in the Eastern Economic Corridor (EEC).

WHAUP Strategic Locations

In 2020, WHAUP's headquarters is located at the 24th floor of UM Tower in Bangkok city, Thailand. However, in 2021, the Company will move its headquarters to WHA Group's new constructed building 'WHA Tower' located in Bang Na area, the gateway to Eastern Economic Corridor (EEC). WHA Tower is equipped with advanced security and surveillance features, building diagnostics, and building management.

WHAUP UTILITES

WHAUP and its subsidiaries have 17 industrial water production plants and 12 wastewater treatment facilities located in 11 industrial estates and lands operated by WHA Industrial Development (WHAID). Out of all 11 industrial estates and lands operated by WHAID, 10 places are located in Thailand whereas the rest is located in Vietnam. Additionally, WHAUP has two commercially operating natural gas distribution projects each located in one of WHA Group's industrial estate. The summary of the locations of WHAUP's water and wastewater productions are as shown below.

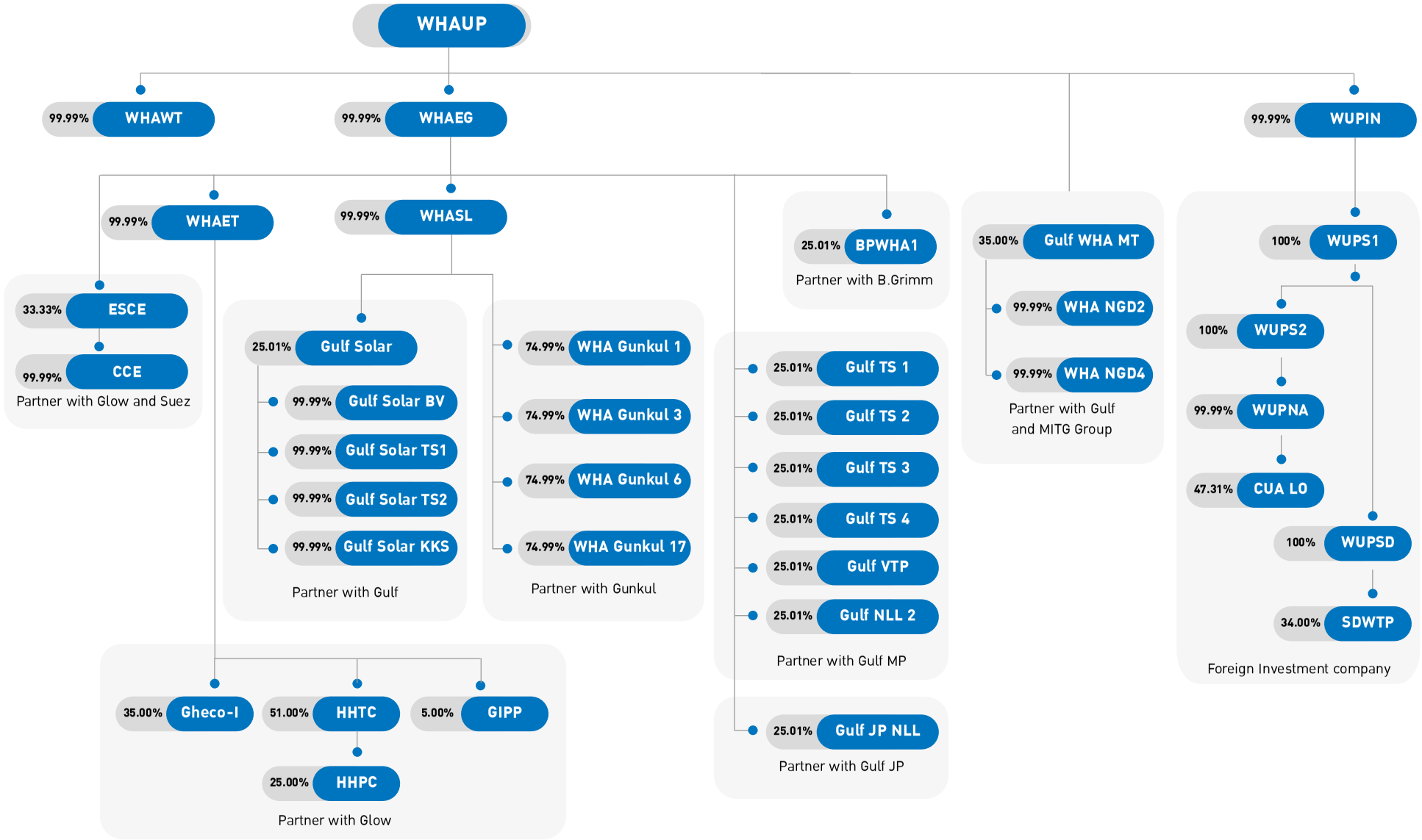
Industrial Estates and Industrial Lands	Location
WHA Eastern Industrial Estate (Map Ta Phut) (WHA EIE)	Map Ta Phut, Rayong province, Thailand
Eastern Seaboard Industrial Estate (Rayong) (ESIE)	Pluakdaeng, Rayong province, Thailand
WHA Eastern Seaboard Industrial Estate 1 (WHA ESIE 1)	Pluakdaeng, Rayong province, Thailand
WHA Chonburi Industrial Estate 1 (WHA CIE 1)	Sriracha, Chonburi province, Thailand
WHA Chonburi Industrial Estate 2 (WHA CIE 2)	Sriracha, Chonburi province, Thailand
WHA Saraburi Industrial Land (WHA SIL)	Nongkae, Saraburi province, Thailand
WHA Rayong Industrial Land (WHA RIL)	Bankhai, Rayong province, Thailand
WHA Eastern Seaboard Industrial Estate 2 (WHA ESIE 2)	Pluakdaeng, Rayong province, Thailand
WHA Eastern Seaboard Industrial Estate 4 (WHA ESIE 4)	Pluakdaeng, Rayong province, Thailand
WHA Eastern Seaboard Industrial Estate 3 (WHA ESIE 3)	Banbung/NongYai, Rayong province, Thailand
WHA Industrial Zone 1 Nghe An	Nghe An, Vietnam
Eastern Economic Corridor of Innovation : EECi	Wangchan, Rayong province, Thailand

WHAUP POWER

Power Plant	Industrial Estates and Industrial Lands	Location
Commercially operating power plants that WHAUP has investment		
Joint Venture with Gunkul Group		
Gulf JP NLL	WHA RIL	Rayong province, Thailand
Gulf Solar KKS	WHA LP1	Chonburi province, Thailand
Gulf Solar BV	WHA CIE 1	Sriracha, Chonburi province, Thailand
Gulf Solar TS1	WHA ESIE 1	Pluakdaeng, Rayong province, Thailand
Gulf Solar TS2	ESIE	Pluakdaeng, Rayong province, Thailand
Joint Venture with Gunkul Group		
WHA Gunkul Green Solar Roof 17	WHA Mega Logistics Centre	Bangna-Trad KM.18, Samutprakan province, Thailand
WHA Gunkul Green Solar Roof 3	WHA Mega Logistics Centre	Bangna-Trad KM.18, Samutprakan province, Thailand
WHA Gunkul Green Solar Roof 6	WHA Mega Logistics Centre	Bangna-Trad KM.18, Samutprakan province, Thailand
WHA Gunkul Green Solar Roof 1	WHA Mega Logistics Centre	Bangna-Trad KM.18, Samutprakan province, Thailand
Joint Venture with B.Grimm Power Group		
BPWHA-1	WHA CIE 1	Sriracha, Chonburi province, Thailand
Joint Venture with Gulf MP Company Limited		
Gulf VTP	ESIE	Pluakdaeng, Rayong province, Thailand
Gulf TS1	ESIE	Pluakdaeng, Rayong province, Thailand
Gulf TS2	ESIE	Pluakdaeng, Rayong province, Thailand
Gulf TS3	WHA ESIE 1	Pluakdaeng, Rayong province, Thailand
Gulf TS4	WHA ESIE 1	Pluakdaeng, Rayong province, Thailand
Gulf NLL2	WHA RIL	Bankhai, Rayong province, Thailand
Joint Venture with GLOW and SUEZ		
CCE	WHA CIE 1	Sriracha, Chonburi province, Thailand
Commercially operating power plants by WHAUP group		
Solar power plants	*	-

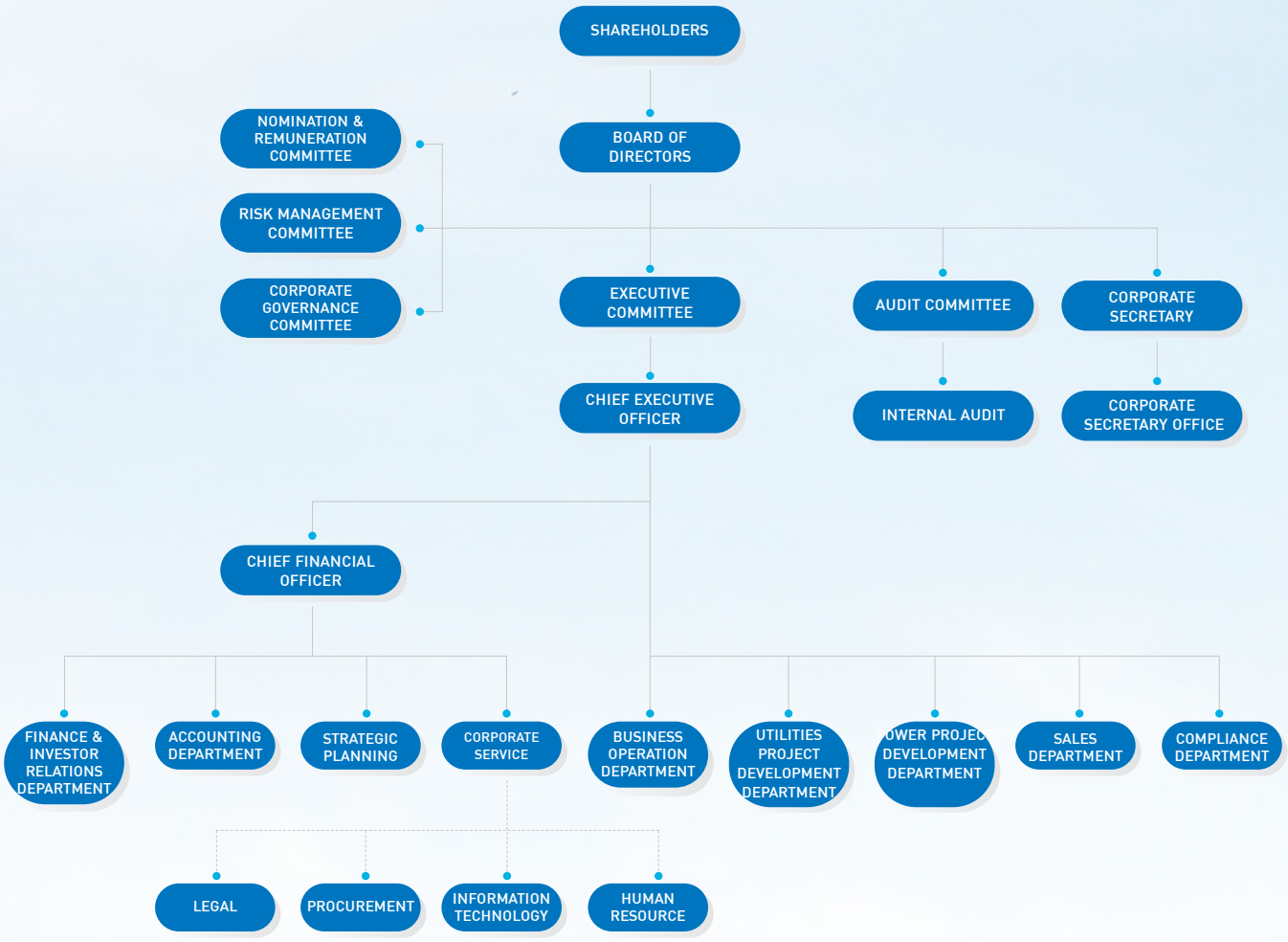
Note*: Solar power plants included many projects located within and outside WHAID's industrial estates and lands such as Solar rooftop projects.

Shareholding Structure



Organization Chart

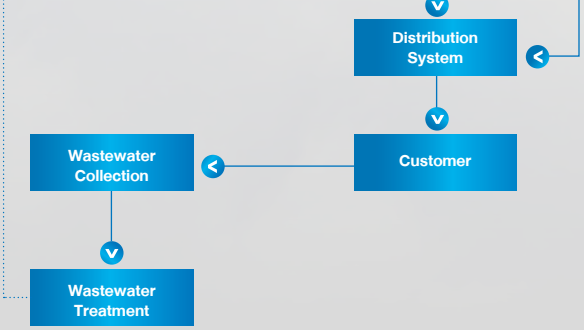
As of 31 December 2020, the management structure of the Company consists of the Board of Directors and five sub-committees, i.e. the Audit Committee, Executive Committee, Risk Management Committee, Corporate Governance Committee, and Nomination and Remuneration Committee. The management structure of the Company is as follow.



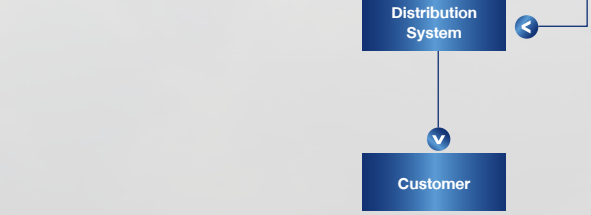
Note : For the functions under the corporation service e.g., Legal, Procurement, IT and HR the Company uses outsource service.

WHAUP Value Chain

UTILITIES



POWER



*Not applicable to Solar Power

Sustainability
Development at WHAUP

WHAUP conducts materiality assessment annually to consider issues that have impact or influence on stakeholders and its operation. Considering internal and external factors, material topics were identified in three aspects: governance/ economics, social, and environment. The materiality assessment process is based on the Global Reporting Initiative (GRI) Standard framework. This allows WHAUP to address the corporate risk management and global trends as well as manage the stakeholders' expectations in a balanced and effective manner.

Materiality Assessment Process

1. **Identification**

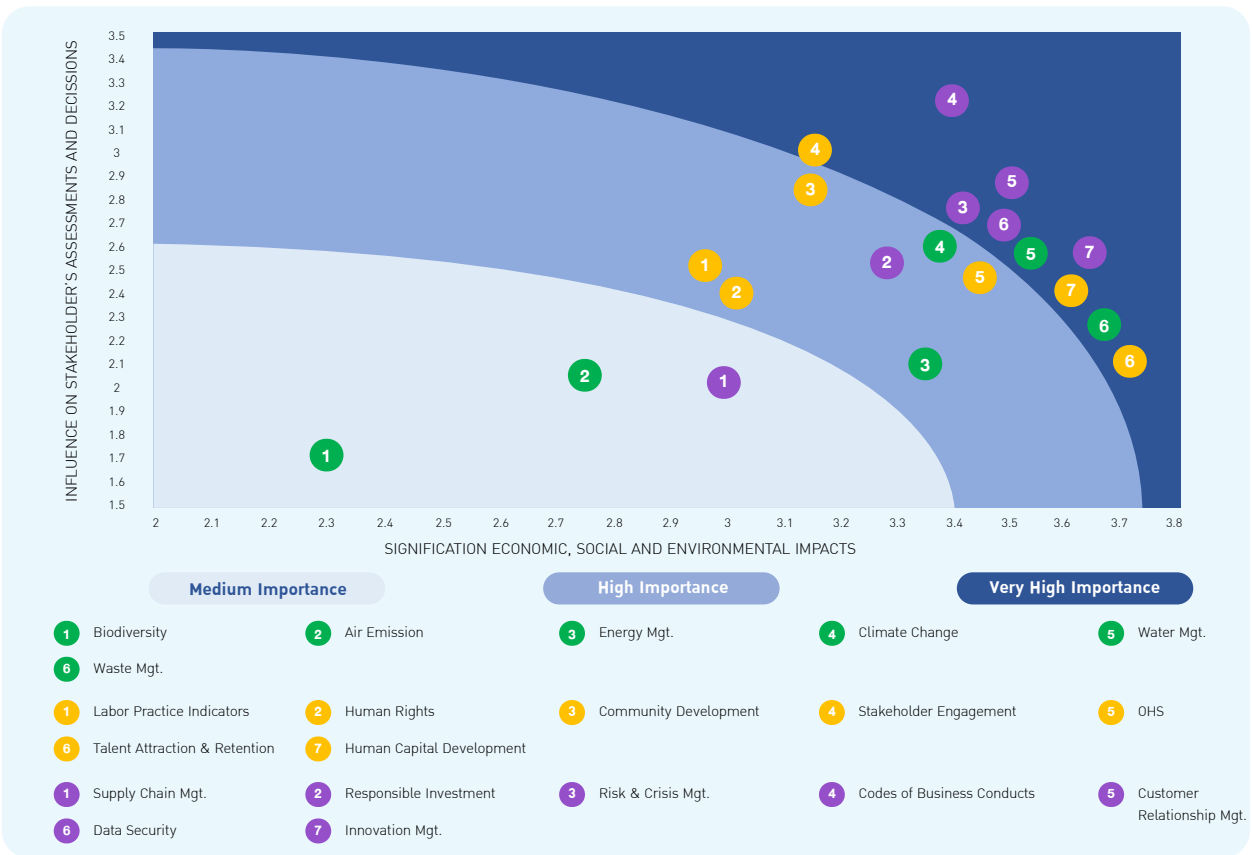
   Identify relevant material topics by considering internal and external factors: business strategic direction, corporate risk profile, relevant standards and requirements (e.g., United Nation Sustainable Development Goals (UN SDGs)), global trends relevant to WHAUP service offerings, and the stakeholders' needs and expectations.

2. **Prioritization**

   The material topics were prioritized based on two criteria: 1) the significance of the topic to WHAUP's economic, environmental, and social impacts and 2) the topic's importance for stakeholders. The material topics were ranked from 1 to 4 which prioritized the material topics into four levels of importance: important, medium, high and very high. In 2020, the materiality prioritization results indicated that the material topics are ranked within the medium, high and very high levels.

3. **Validation**

   WHAUP conducted a materiality endorsement meeting which were attended by WHA Group and WHAUP senior management positions and CEOs. The management took the responsibilities for reviewing and validating the proposed materiality assessment results and provided approval for information disclosure.



Sustainability Strategy

In 2020, WHAUP has adopted WHA Group's sustainability strategy and corporate long-term targets that contribute and provide support in driving WHA Group to achieve its business ambition to stay ahead and becoming "Your Ultimate Solution Partner". The sustainability strategy is built on the foundation of good corporate governance, human capital as strategic enabler and key driving forces including digitization and natural resources. The strategy supports the UN SDGs, and takes into consideration the risks and opportunities analyzed from global existing and emerging trends.

BUSINESS DIRECTION
"YOUR ULTIMATE SOLUTION PARTNER IN UTILITIES & POWER WITH ENVIRONMENTAL CARE"

CORPORATE VALUE

NATURAL RESOURCES

- Double the reclaimed industrial water for industrial use from 30,200 cubic meter/day in 2020 to 60,400 cubic meter/day by 2025
- Reduce proportion of waste to landfill or incineration below 50% in 2021 and below 20% by 2025.

CORPORATE VALUE

DIGITIZATION

- Revenue generation and cost reduction from innovation projects
- 100% data breach prevention in terms of data leaks, thefts or losses of both inbound and outbound data are achieved in 2025

CORPORATE VALUE

HUMAN CAPITAL

- Maintain Human Capital Return on Investment at 27x by 2025
- 88.8% Employee Engagement Score in 2020
- Have overall turnover rate not greater 8.5% in 2025
- Have talent turnover rate not greater 3% in 2025

CORPORATE VALUE

GOVERNANCE

- 100% acknowledgement and communication of Code of Conduct to subsidiary,
- employees and suppliers/contractors by 2025
- 100% employees at all levels are trained on risk management by 2022
- Support WHA Group to maintain market share for industrial development at 32%
- 96% customer satisfaction score in 2020

CORPORATE VALUE

Sustainability Material Issues and Impact Boundary

Report Dimension	Material Issues	Corresponding GRI Topic	Key Stakeholders and Impact Boundary		SDGs	Page
			Internal	External		
GOVERNANCE/ ECONOMICS	Stakeholder Engagement	• 103 Management approach • 102-40 List of stakeholder groups • 102-42 Identifying and selecting stakeholders • 102-43 Approach to stakeholder engagement • 102-44 Key topics and concerns raised	Employee	• Community • Government/ Regulator • Shareholder/ Investor • Media • Financial Institution • Supplier/ Creditor • Customer		22-27
	Codes of Business Conduct	• 103 Management approach • 102-16 Values, principles, standards, and norms of behaviour • 102-17 Mechanisms for advice and concerns about ethics • 205-2 Communication and training about anti-corruption policies and procedures • 205-3 Confirmed incidents of corruption and actions taken	Employee	• Supplier/ Creditor • Government/ Regulator • Financial Institution • Customer		29-32
	Risk and Crisis Management	• 103 Management approach	Employee	• Financial Institution • Government/ Regulator • Customer • Shareholder/ Investor		33-36
	Responsible Investment	• 103 Management approach		• Financial Institution • Media • Shareholder/ Investor		37-38
	Supply Chain Management	• 103 Management approach • 308-1 New suppliers that were screened using environmental criteria • 308-2 Negative environmental impacts in the supply chain and actions taken • 414-1 New suppliers that were screened using social criteria • 414-2 Negative social impacts in the supply chain and actions taken	Employee	• Supplier/Creditor • Customer		39-41
	Customer Relationship Management	• 103 Management approach	Employee	• Customer • Supplier/Creditor		42-45
	Innovation Management	• 103 Management approach • 203-1 Infrastructure investments and services supported	Employee	• Shareholder/ Investor • Customer • Financial Institution • Government/ Regulator • Supplier/Creditor		46-48
	Data Security	• 103 Management approach • 418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data	Employee	• Customer • Financial Institution • Shareholder/Investor • Supplier/Creditor		49-51
Social	Human Rights	• 103 Management approach • 412-2 Employee training on human rights policies or procedures	Employee	• Community • Government/Regulator • Media • Supplier/Creditor • Customer		54-55
	Labor Practice Indicators	• 103 Management approach • 405-1 Diversity of governance bodies and employees	Employee	• Media • Supplier/Creditor		56

Report Dimension	Material Issues	Corresponding GRI Topic	Key Stakeholders and Impact Boundary		SDGs	Page
			Internal	External		
	Talent Attraction and Retention	• 103 Management approach • 401-1 New employee hires and employee turnover • 401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees • 404-3 Percentage of employees receiving regular performance and career development reviews	Employee	• Supplier/ Creditor		57-59
	Human Capital Development	• 103 Management approach • 404-1 Average hours of training per year per employee • 404-2 Programs for upgrading employee skills and transition assistance programs	Employee	• Shareholder/Investor • Supplier/Creditor		60-62
	Occupational Health and Safety	• 103 Management approach • 403-1 Occupational health and safety management system • 403-2 Hazard identification, risk assessment, and incident investigation • 403-3 Occupational health services • 403-4 Work participation, consultation, and communication on occupational health and safety • 403-5 Worker training on occupational health and safety impacts directly linked by business relationships • 403-6 Promotion of worker health • 403-7 Prevention and mitigation of occupational health and safety management system • 403-9 Work-related injuries	Employee	• Customer • Community • Supplier/Creditor		63-67
	Community Development	• 103 Management approach • 201-1 Direct economic value generated and distributed • 413-1 Operations with local community engagement, impact assessment, and development programs	Employee	• Community • Government/Regulator • Shareholder/Investor • Media • Customer		68-79
Environment	Biodiversity	• 103 Management approach • 304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	Employee	• Customer • Supplier/ Creditor • Government/ Regulator • Community • Financial Institution • Shareholder/ Investor • Media		83
	Water Management	• 103 Management approach • 301-2 Recycled input materials used • 303-1 Interactions with water as a shared resource • 303-2 Management of water discharge-related impacts • 303-3 Water withdrawal • 303-4 Water discharge	Employee	• Customer • Supplier/Creditor • Government/Regulator • Community		84-87
	Waste Management	• 103 Management approach • 306-1 Waste generation and significant waste-related impacts • 306-2 Management of significant waste-related impacts • 306-3 Waste generated • 306-4 Waste diverted from disposal • 306-5 Waste directed to disposal	Employee	• Customer • Supplier/Creditor • Government/Regulator • Community		88-91
	Air Emission	• 103 Management approach • 305-7 Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	Employee	• Customer • Supplier/Creditor • Government/Regulator • Community • Financial Institution		92-93
	Climate Change (Physical and Transition risks)	• 103 Management approach • 305-1 Direct (Scope 1) GHG emissions • 305-2 Energy indirect (Scope 2) GHG emissions	Employee	• Customer • Supplier/Creditor • Government/Regulator • Communityyeah • Financial Institution • Shareholder/Investor		94-95
	Energy Management	• 103 Management approach • 302-1 Energy consumption within the organization • 302-4 Reduction of energy consumption	Employee	• Customer • Supplier/Creditor • Government/Regulator • Community • Financial Institution • Shareholder/Investor		96-98

Stakeholder Engagement

WHAUP recognizes that every stakeholders have unique and equally valuable perspectives. Having a shared understanding and good relationship with each stakeholders is fundamental for the success of all business operations. As a result, it is essential for WHAUP to actively engage and communicate with these stakeholders in order to maintain a strong foundation for the business's sustainable growth.

Management Approach

WHAUP has a well-defined stakeholder management approach. Stakeholders are defined as individuals, groups of individuals or organizations in the business chain that may be affected by the Company's actions. To ensure efficient stakeholder management, WHAUP applies the same stakeholder engagement process as conducted by WHA Group. Stakeholders are identified, prioritized and engaged on an annual basis. The process for identifying and prioritizing stakeholder groups is based on the extent of their dependency, directly or indirectly, towards the Company's activities, products, performances or services, and their influence or impacts to business strategy or operational decision-making. In 2020, WHAUP identified eight stakeholder groups including Financial Institution, Media, Community, Shareholder/Investor, Customer, Government/ Regulator, Employee, and Supplier/Creditor, that the top three of the stakeholders by ranking of WHAUP are 1) Customer 2) Employee and 3) Community. The identified stakeholders' interests, expectations and concerns are attained through various engagement approaches and channels as detailed in the following subsections of this Report. Concerns and opinions received are reported to the Company's Supervisor and the Sustainable Development Committee, comprising of managers and responsible personnel from relevant departments, to acknowledge, assess and strategize efficient and suitable responses to cater for the stakeholders' interests. The results of stakeholder engagement process are then subsequently reported to the Executives for awareness and incorporated as inputs for maturing business decisions.

Results of Stakeholder Engagement

Employee

Engagement Channels and Frequency	Key Topics and Concerns	Actions and Response
• Various all time communication channels (e.g. email, supervisor, intranet etc.) • Annual CEO Town Hall • Quarterly Executive Sharing • Annual employee satisfaction and engagement survey • Suggestion box • Whistle blowing channel • Bi-weekly management meeting	• WHAUP outlook	• Update the performance and business outlook
	• Business trends and updates	• Share business trends and updates via WHA's communication channels
	• Update on news and knowledge sharing	• Communicate and share updated situations and Executive knowledge
	• Training and career development program	• Develop and provide suitable training programs
	• Work environment	• Communicate on corporate values and strategy
	• Compensation, welfare, and benefits	• Regularly review and improve employees' compensation and benefits
	• Management of occupational health and safety	• Promote good occupational health and safety culture • Implementation of management approaches to prevent COVID-19 impacts (e.g. Work From Home, sanitation as per best practices and regulations)
	• Business continuity plan	• Update and communicate business continuity plan via various communication channels in a timely manner • Conduct business continuity plan rehearsals to ensure practices and requirements are strictly and effectively followed

Shareholder/Investor

Engagement Channels and Frequency	Key Topics and Concerns	Actions and Response
• Annual general meeting • Annual Report and Sustainability Report • Roadshow • Analyst meeting • Outlook meeting • Investor site visit • Opportunity Day • Various all time communication channels (e.g. telephone, email, website etc.)	• Business performance, such as returns, benefits and profits	• Improve business competitiveness and business directions to be up-to-date • Adopt digital technologies including Microsoft Teams and Zoom to conduct meetings to reduce impacts of COVID-19 spread from face-to-face interactions
	• Business transparency	• Ensure good corporate governance • Take part in Thai CAC
	• Changes in business management and business risks	• Conduct enterprise risk management and establish short and long-term plan
	• Sustainability performance	• Manage sustainability material topics • Ensure environment and social compliance • Promote innovation and sustainability initiatives

Customer

Engagement Channels and Frequency	Key Topics and Concerns	Actions and Response
• Roadshow/ marketing events/ webinar • Quarterly business meeting/ video conference	• Product and service inquiry	• Provide product and service information on website and other media • Provide prompt response to customers' inquiry
• Annual customer satisfaction survey • Quarterly customer clubs • Quarterly WHA Connect magazines	• Quality of after sale services	• Establish effective customer relationship management • Continuously improve customer relationship management from customer's comments / suggestions
• Various all time communication channels (e.g. telephone, email, key contact personnel, social media etc.)	• Environment management, compliance and standards	• Strictly comply with related laws and regulations and apply international environmental management standards where possible
	• Risk and crisis management	• Conduct risk and crisis assessment and implement appropriate mitigation actions • Inform customers of relevant risks and crisis management plan and measures • Support customers' impacts from COVID-19 outbreak as appropriate

Supplier/Creditor

Engagement Channels and Frequency	Key Topics and Concerns	Actions and Response
• Supplier event • Supplier site visit • Telephone and Email • Self-evaluation and onsite visits	• Transparency in procurement process	• Developed procurement policy and procedure
	• Business opportunities and collaboration	• Conduct Suppliers-meet- Customers day
	• Compliance with WHAUP's standard	• Communicate on WHAUP's procurement policy • Conduct supplier assessment and provide feedback/ corrective action plans to guide suppliers for improvement
	• On-time payment and following the contract agreement	• Follow the contract agreement • Disclose information according to the agreed condition
	• Environment, social and governance management	• Communicate concerns related to environment, social and governance criteria • Reduce face-to-face meetings to reduce COVID-19 risks • Evaluate supplier criteria to ensure that environmental, social and governance concerns are limited • Ensure environmental management compliance are strictly followed
	• Material quality and its environmental impacts	• Develop screening process to ensure that it complies with the Supplier Code of Conduct
	• Labor conditions (i.e. human rights)	• Ensure there is no violations of labor conditions or human rights issues

Government/Regulator

Engagement Channels and Frequency	Key Topics and Concerns	Actions and Response
• Meeting on occasion • Various all time communication channels (i.e. telephone, email and Line application)	• Regulatory compliance	• Strictly comply with relevant laws and regulations
	• Stakeholder impact management	• Develop effective stakeholder engagement plans
	• Corporate governance and transparency	• Ensure good corporate governance and implementation of business code of conduct

Community

Engagement Channels and Frequency	Key Topics and Concerns	Actions and Response
• Public hearing and meeting • Community activities • Community engagement survey • Local community representatives • Site visits	• Business operations' impacts on communities' well-being (i.e. water withdrawal, water discharge quality, chemical leakage, etc.)	• Conduct regular community feedback survey to ensure there is no adverse impacts on local community • Implement mitigating actions where business operation activities affect community's well-being • Involve surrounding communities in crisis management and emergency drill
	• Environmental management performance	• Ensure compliance with environmental related laws and standards
	• Community development and support	• Initiate community development programs regularly • Share WHAUP's expertise with local communities • Implement community development initiatives that supports the communities to tackle COVID-19 impacts
	• Community engagement	• Provide effective and prompt response to community complaints • Conduct community meeting to understand communities' needs and suggestions

Financial Institution

Engagement Channels and Frequency	Key Topics and Concerns	Actions and Response
• Various all-time communication channels (i.e. email, phone, line application, conference, etc.) • Annual greetings • Quarterly analyst meetings	• Business performance and outlook	• Improve and keep business competitiveness and business directions up-to-date • Adopt digital technologies including Microsoft Teams and Zoom to conduct meetings to reduce impacts of COVID-19 spread from face-to-face interactions
	• Business transparency	• Ensure good corporate governance • Strictly comply with Disclosure Policy
	• Changes in business management and business risks	• Notify significant updates or changes in a timely manner
	• Sustainability performance	• Manage sustainability material topics • Promote innovation and sustainability initiatives • Assess sustainability issues along with investment decision process
	• Green initiative	• Seeking out new funding that concerns with green issues and related aspects

Media

Engagement Channels and Frequency	Key Topics and Concerns	Actions and Response
• Various weekly or bi-weekly communication channels (i.e. press release, photo captions, executive interview and news article) • Annual press conference, press tour/visits and annual greetings • Quarterly Group interviews • Bi-annual press briefings	• Business outlook/ Business direction	• Hold annual press conference to update business plan and directions
	• Updates on products and services	• Frequently update on the development of company's activities through media channels • Disclose accurate information on the basis of facts
	• New customers	
	• CSR initiatives and environmental management	
	• Business outlook	
	• Financial results	
	• Technological advancements	
	• Strengthening relationships	• Maintain good and long-term relationships with the media • Communicate through online platforms to reduce COVID-19 impacts from face-to-face meetings

Governance and Economic

- Codes of Business Conduct
- Risk and Crisis Management
- Responsible Investment
- Supplier Chain Management
- Customer Relationship Management
- Innovation Management
- Data Security

Codes of Business Conduct

Good corporate governance values the act of transparency, accountability, responsibility and fairness. It is the foundation for ensuring that a company is managed responsibly and ethically to support the sustainable and long-term business growth. Thus, the Board of Directors at WHAUP carries crucial responsibilities to oversee the Company's ethical performances. Nevertheless, stakeholders in the value chain are also expected to abide by such principles. The encapsulated good corporate governance enhances trusts and signals to customers that WHAUP is well managed, and that the stakeholders' interests are aligned with the managements' perspectives.

Management Approach

Codes of Business Conduct

WHAUP aligns its good corporate governance management approach in accordance with the national guidelines developed by the Stock Exchange of Thailand (SET) as well as international approaches such as the United Nations Global Compact.

To ensure that business operations are pursued in accordance with the principles of integrity, ethics and responsibility towards the environment, society and governance, Corporate Governance Committee established a Code of Conduct (CoC), which was endorsed by the Board of Directors. The CoC governs the practices of all WHAUP's employees, suppliers, contractors, joint ventures and subsidiaries. The CoC is available in both Thai and English languages to ensure widespread understanding and transparency for all local and foreign stakeholders. The CoC is subjected for review annually, and the most recent revision is publically disclosed on WHAUP's website and intranet, such that employees and external stakeholders could conveniently access the information. WHAUP's CoC is as disclosed at link.

Anti-Corruption

WHAUP works to empower all stakeholders in the value chain to act with integrity. To ensure the Company's intention to anti-corruption, WHAUP announced Anti-Corruption Policy that is enforced to all of the employees, subsidiaries, suppliers and contractors. The Policy prevents the misuse of authorities, prohibit engagement with any forms of frauds or bribery and that business is operated in a lawful manner.

To govern anti-corruption, WHAUP appointed an Audit Committee to oversee and ensure that operational activities are in line with the enforced Policy. The Committee is responsible for assessing, managing and mitigating risks associated with unlawful activities, corruption or any fraudulent actions. An example of the Company's proactive action includes development of a guideline for Gift Policy in accordance with the Code of Conduct as well as a Letter of Request for 'No Gifting' Cooperation. The Gift Policy was communicated to managing directors, suppliers and business partners to elevate good corporate governance practice and standardize transparency as a whole.

Moreover, WHAUP's determination and commitment to prevent corruption and bribery for business interests is highlighted as the Company became a member of Thailand's Private Sector Collection Action Coalition against Corruption (CAC). The CAC is a collective group of private companies sharing the same vision to tackle corruption in Thailand. WHAUP was certified by the Thai Institute of Directors (IOD) since November 2019.

Compliant Management

WHAUP listens and values any concerns stakeholders may have particularly towards misconduct, violations or corruption against the laws, regulatory requirements, corporate governance principles or the CoC and Anti-Corruption Policy. Hence, to assure that the stakeholders are comfortable to report and inform clues, suspicions, advice, grievances or complaints, WHAUP offers various channels and established a grievance mechanism process. As a whistleblower, the employee or external stakeholders are protected from victimization.

Reporting Channels

Channels for Employees

- www.wha-up.com
- Comment Box
- CEO@wha-up.com
- auditcommittee@wha-up.com

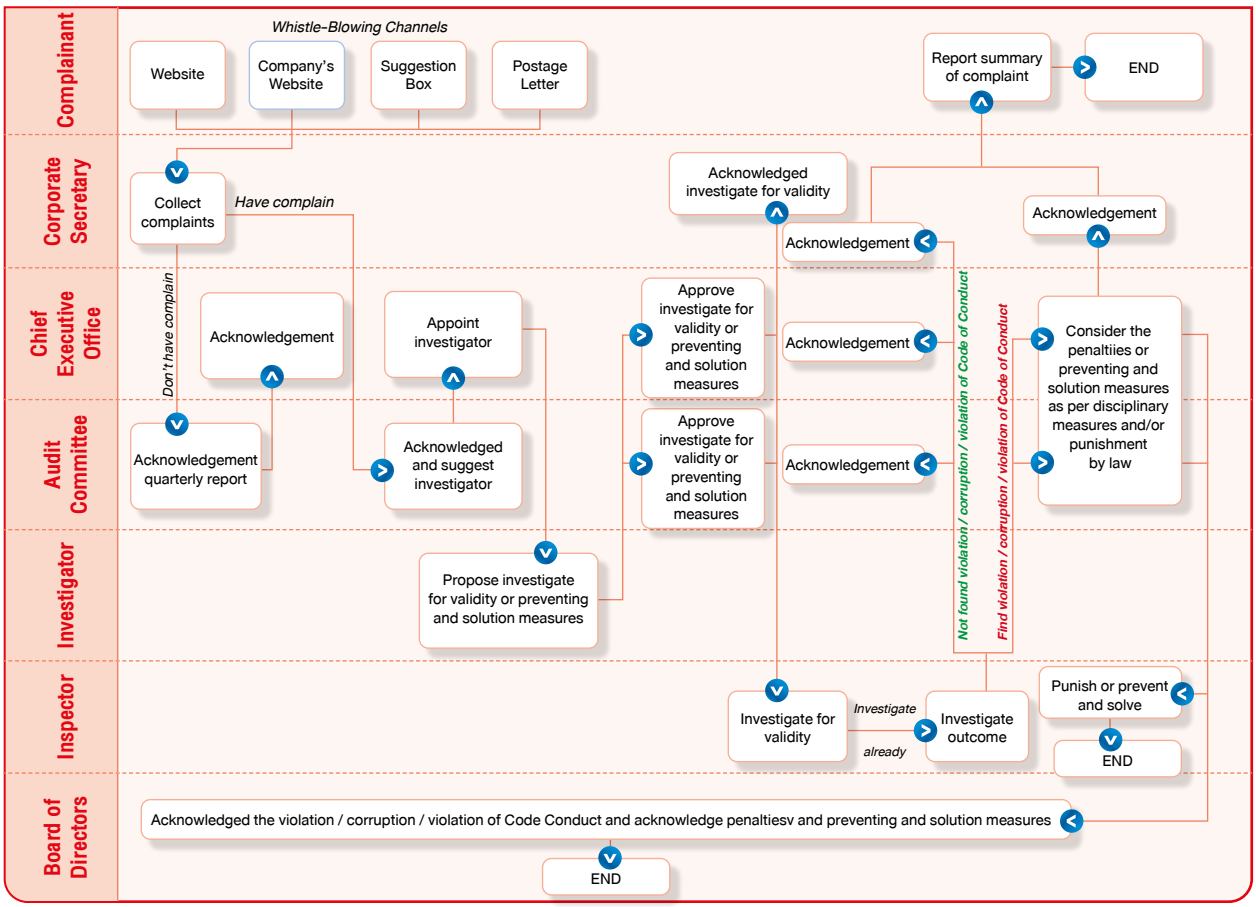
Channels for External Stakeholders

- www.wha-up.com
- CEO@wha-up.com
- auditcommittee@wha-up.com

In the event that the Company receives a report regarding corruption, the Corporate Secretary is responsible to report the case to the Audit Committee to appoint investigator and conduct case investigation, as appropriate. Based on the conclusion of such investigation, appropriate disciplinary actions will be taken and acknowledged by the Board of Directors. For any cases found to violate applicable laws, necessary legal actions will be imposed. Starting in 2020, WHAUP conducts internal audit and if complaints are received, the case will be reviewed quarterly through the Audit Committee meeting, and communicated as one of the meeting agenda in the Board of Directors meeting. This process, therefore, ensures that the reoccurrence of potential cases are prevented.

Throughout 2020, no violations against regulatory requirements or the Company's policy was identified. No reports or complaints were made regarding the topics of corporate governance and corruption were submitted through the established channels.

Whistle-Blowing Process



Enhance and Awareness Raising for Good Corporate Governance

As WHA Group's subsidiary company, WHAUP fully adopts the Group's corporate values. This ensures that WHAUP employees hold the same values, mindset and competency to drive WHAUP and support WHA Group to achieve the determined visions. Corporate governance is intertwined under the corporate value of 'integrity'. Upholding integrity value throughout the business operations enables WHAUP to cultivate trust and enhance stakeholders' confidence that the Company abides by the principles of good corporate governance.

INTEGRITY

"To instill mutual trust and confidence, create a culture that fosters transparency and work ethics as well as demonstrates a sense of corporate responsibility."

Advanced | **Champion** | **Resourceful** | **Partnership** | **Integrity**

Together with WHA Group, WHAUP conducted the following trainings and activities to increase employee's awareness towards good corporate governance.

- All new employees are required to surpass the compulsory trainings on Code of Conduct and Anti-Corruption principles, as part of their orientation program.

- In 2020, WHA Group's Human Resource Department initiated a mandatory online refreshers trainings through a "self-learning program" for all current employees, inclusive of WHAUP, on the CoC and Anti-Corruption Policy. The employees' understandings were analysed through compulsory questionnaires at the end of each individual online session. For those who are unable to complete the online training, responsible departments will conduct an in-class refreshers training course in 2021. This online training is a lasting refreshers program that will be conducted annually or upon revisions to the corporate governance related policies.

Target Groups	2020 Performance	2025 Target
Percentage of employees acknowledging and communicated of the Code of Conduct by 2025	100%	100%
Percentage of subsidiary companies acknowledging and communicated of the Code of Conduct by 2025	100%	100%
Percentage of suppliers/ contractors acknowledging and communicated of the Code of Conduct by 2025	100%	100%

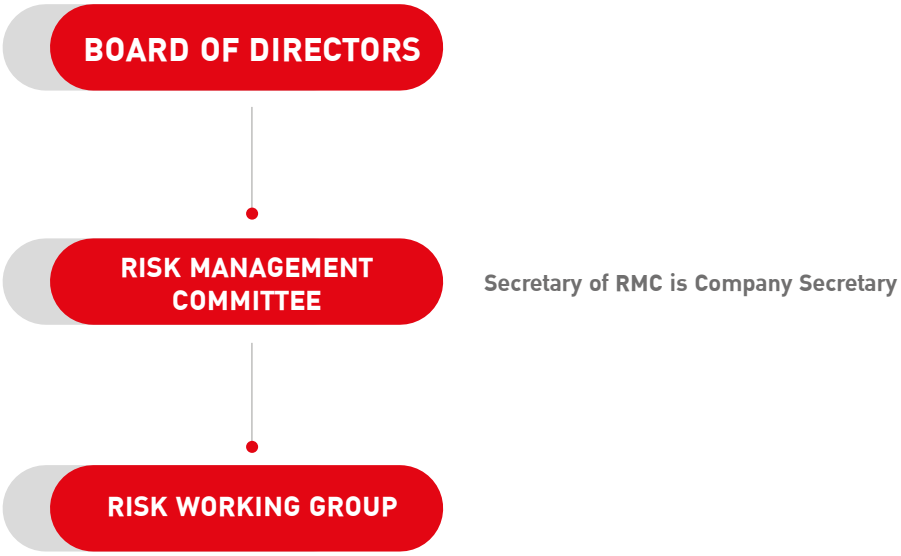
Risk and Crisis Management

Due to the constant changes and uncertainties occurring throughout 2020, the levels of concerns and challenges introduced on business operations have heightened, which accentuates the significance of an effective risk management approach. Hence, WHAUP implemented a systematic management approach to take into account of potential risks and responsive schemes appropriately. Acknowledging and addressing potential risks early allows WHAUP to increase resilience and stay ahead against uncertainties, which supports and drives competitive advantages, sustainability and long-term business growth.

Management Approach

Risk Management Organization

WHAUP has clearly established the risk management structure along with the associated roles and responsibilities. To ensure that risks are appropriately and effectively managed, a Risk Management Committee (RMC) was established. The Committee comprises of members from the Board of Directors, enabling a full perspective of potential risks imposed on the business operation. To support the implementation of risk management processes, a Risk Working Group comprising of members at executive positions and department heads was established. The Risk Working Group follows the guidance provided by the RMC to manage operational risks in their specific areas of responsibilities. Furthermore, the Risk Management Group holds regular meetings, also with WHA Group's designated working group, to monitor group-wide risk factors and identify any potential emerging risks, and reports to the RMC for subsequent address in Board of Directors meetings. The RMC conducts meetings, at least two times a year, to assess the risk profiles.



Risk Management Framework

In alignment with WHA Group's Risk Management Policy, a Risk Management Framework was developed as a guiding compass at WHAUP. The Risk Management Framework was designed based on international standards such as the Committee of Sponsoring Organizations of the Treadway Commission (COSO) and Enterprise Risk Management (ERM) frameworks. The Policy is reviewed annually by WHA Group's RMC, inclusive of representatives from WHAUP RMC, to ensure that the governing Policy has captured material risks and appropriate measures are taken to manage and monitor the risks; balanced against business opportunities and up-to-date with the global trends.

WHAUP conducted the Enterprise Risk Management based on the established framework to identify material risks, assess the impacts on its operations and identify management approach. Illustrated below is the risk management methodology adopted by WHAUP. Internal and external risk factors on four major areas comprising of strategy, operational, financial and compliance risks were assessed. Material risks and the respective measures are regularly communicated to all employees to build the overall awareness of risk management within the Company. With employees understanding the importance of risk management, a uniform vision is created, thus supporting the Company to readily prepare and mitigate any potential disruptions. Additional details of the identified material risks can be found in WHAUP's Annual Report 2020.

RISK IDENTIFICATION	RISK ASSESSMENT	RISK REPONSE AND MITIGATION MEASURES	RISK REPORTING, MONITORING AND COMMUNICATION
• Identification of internal and external risk, along with business impacts. • Categorization of identified risks under four categories: Stategic, Financial, Operation and Compliance.	• Calculation of risk levels following standadized assessment criteria. • Prioritization of risks based on risk profile and appetite.	• Detemine actions to respond, mitigate potential impacts and ultimately reduce high level risks to acceptable levels	• Communication of risks to all executive and employees to build a strong risk management culture. • Risk Working Group reports risk management action plans, results and progress to RMC on a Quarterly basis. • Optimize internal communication chanels to disseminate relevant risk information.

Emerging Risks

Taking into account all angles which risks may impact the business operation, WHAUP also places great importance in analyzing potential game changers. With the mentality to stay ahead of competition, acknowledgement and consideration of emerging risk supports WHAUP to determine and/or modify strategic business plans accordingly. Consequently, negative impacts of the potential emerging risks will therefore be minimized or prevented. For 2020, the two emerging risks identified were digital disruption and climate change.

1. Digital Disruption

Description and Impact: Digital disruption is an unstoppable force and to try and fight it is tough. Digital disruption and digitization are the most important movements facing businesses today. Emergence of new digital technologies disrupt the current market and causes the need for both WHAUP and its customers to keep up and embrace digital transformation. As an integrated utilities and power service provider, disruption to customers' operations would pose direct impacts to WHAUP business performances. It is therefore essential for both parties to be ahead of the game. To allow for this, WHAUP allocates resources to develop competitive advantages within the digital trend; focusing on the prompt response on market conditions, grasp of business opportunities and driving business growth further.

Mitigation Actions: To address impacts from potential digital disruptions, WHAUP has conducted multiple digital innovations to respond and seize the opportunities from digitization. Specifically throughout 2020, WHAUP has been constructing the foundation to extend the Company's capacity with new utility products as well as broaden the power portfolio with innovation energy solutions through the SMART Energy Initiatives. SMART Energy is a combination of multiple initiatives designed specifically for electricity generation and energy management such as the SMART Microgrid, Peer-to-Peer energy trading, Net Metering and Energy Storage. Further detail is enclosed in the Innovation Management chapter.

2. Climate Change Transition Risk

Description and Impact: Physical risk from a changing climate is already present and only escalating as each days go by. Thus, with each industry realizing the significant risks and opportunities introduced by climate change, transitional risk are formed. External drivers influencing transitional risks include legal issuance or enforcement of more stringent climate change related laws and regulations. For WHAUP, it is perceived that transitional risks as a result of climate change, will be beneficial for the Company's business operations. Increase in interest for renewable energy directly translates to increase in opportunities for solar energy business and hence, growth in the renewable energy portfolio. Nevertheless, potential non-compliance to regulatory changes could inversely impact WHAUP's business in terms of reputational, financial penalties and criminal liabilities.

Mitigation Actions: Driven by WHAUP's business strategy for 2020, the Company has successfully enlarged the capacity of solar energy portfolio to 51 MW in the midst of the unprecedented global pandemic. WHAUP continuously improves the renewable solar energy service, ensuring high satisfaction from customers. Moreover, to reciprocate transitional risk in the aspect of technology and social norms, WHAUP has been developing additional services to support efficient consumption of natural resources.

Crisis Management and Business Continuity Management

WHAUP has adopted the Business Continuity Plan (BCP) that was developed by WHA Group to allow for smooth operations within the Company and prompt responses. WHAUP is well aware of the challenges, potential damages and losses on the Company's assets or impacts on the lives of stakeholder which may occur in a crisis event such as natural disasters, disease pandemic and terrorism, etc. In 2020, the BCP was revised to cover crisis and situations that could cause potential business disruptions. Such situations were identified through the risk assessment process.

A key factor incorporated in the revision of the BCP in 2020 was the global pandemic COVID-19. The BCP was amended to include measures required to protect employees and business against the impacts of the pandemic outbreak. This includes the required actions in the event that an employee of WHAUP or the operating site are identified to have COVID-19 or located in a high risk area. Furthermore, the BCP covers details regarding the safety measures as recommended by Governmental authorities (e.g. temperature checks, social distancing and working from home as applicable). It should be noted that with the implementation of the robust Business Continuity Plan developed, none of WHAUP's employees and management team were found to have caught the virus.

Shaping Risk Culture

Although risk management and governing frameworks are essential drivers of a positive risk culture, the rooting fundamentals are the awareness, attitudes and behaviors of employees and executives within the organization. Hence, WHAUP has been continuously working on building and creating an effective risk culture throughout the Company.

WHAUP has worked in collaboration with WHA Group on aligning motivational systems from top-down approach. Identified risk aspects are embedded into executive's and risk owner's key performance indicators (KPIs), which are evaluated as part of individual performance appraisal. Examples of risk evaluation criteria used throughout the Company are compliance, reputation and financial performances.

Additional measures implemented to strengthen the risk culture include organizing trainings and activities on risk management on a regular basis. The objectives of these activities are to raise awareness and build employee competency to identify, control and mitigate potential risks associated with their duties and responsibilities. WHAUP sets a target, in alignment with that of WHA Group, to ensure 100% of its employees at all levels are trained on risk management by 2022.

Key trainings and activities conducted in 2020 are as follows:

- Executives are updated on global trends via RMC Report during the Board of Directors meeting. This ensures that throughout the overall risk management process, executives, RMC as well as risk working group are well aware of risk profiles, emerging risks and risk mitigation measures. Therefore, 100% top management positions are presumed trained on risk management.

- In 2020, WHAUP adopted the Three Lines of Defence (3LOD) model to effectively enhance the communications on risk management and control by clarifying essential roles and duties of relevant employees involved. In the 3LOD model, management control is the first line of defence in risk management, the various risk control and compliance oversight functions established by management are the second line of defence, and independent assurance is the third. Each of these "lines" plays a distinct role within the organization's wider governance framework. Therefore, the employee groups involved are functions that own and manage risks, functions that oversee risks and functions that provide independent assurance. All relevant functions are expected be well aware and communicated on such model to ensure effective risk management within the organization.

- In 2021, WHAUP aims to conduct risk management trainings to employees at manager positions at the operating sites. The training program is designed to help the participants understand risk profiles and risk mitigation measures at their responsible areas of work. Thus, enhancing an effective risk culture.

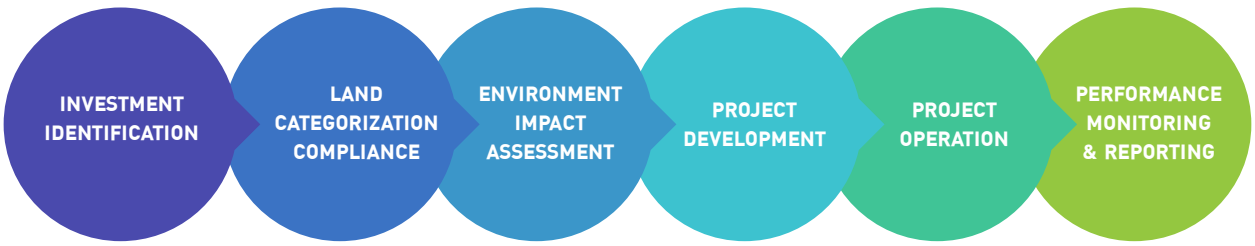
Furthermore, WHAUP aims to incorporate digital innovations to improve the risk culture. The Company intends to utilize the digitalized system, equipped with an alarm, which is being developed by WHA Group. Such system will portray all key risk statuses to effectively monitor and track the risk management implementation.

Responsible Investment

Investments may translate to losses if the long-term sustainable business objectives are not foreseen and laid out from the very start. Companies acknowledge that the management of environmental, social and governance (ESG) concepts play critical roles in translating and driving businesses towards sustainable growth. As a result, ESG aspects have been factored and taken into account from the very earliest stages of investment decisions. Additionally, practices of responsible investment also assures and enhances the trusts and confidence of stakeholders, specifically the customers and financial institutions, that ESG has been considered as part of the utilities and power services provided.

Management Approach

Responsible investment is implemented by managements to mature decisions and aim to generate long-term business values. WHAUP favors investment opportunities that generate potential tangible sustainable ESG benefits for its business and stakeholders in the value chain. Examples of WHAUP services that are derived from responsible investment are the provision of reclamation water, renewable energy through solar rooftop and waste-to-energy project. Details of the sustainable outcomes of these responsible investment projects are described in the subsequent environmental chapters. Furthermore, WHAUP also underpins responsible investment by abiding with the laws and regulations.



Responsible investment at WHAUP are reviewed since the very beginning of project development from location setting until operation. For WHAUP's projects, its location settings are decided based on the land zoning requirements prescribed under the Town Planning Act, B.E. 2518 (1975). Similar to WHA Industrial Development (WHAID), WHAUP will not invest in lands that are located immediately adjacent to areas with architectural or historical interests, high biodiversity risks or extreme environmental concerns. Furthermore, strategic benefits of investment opportunities in areas such as the Eastern Economic Corridor (EEC) are considered due to the incentives and schemes (e.g. tax deductions, connectivity in trade routes, real estate ownership by foreign entities, etc.) that may attract and provide for its customers.

For WHAUP's projects located within the premises of WHA Industrial Development (WHAID) industrial complex, WHAUP is not obligated by law to conduct its own Environmental Impact Assessment (EIA) study. However, the environmental and social risks imposed by WHAUP is analyzed as part of its located industrial estate's EIA report. This assessment study assures regulatory compliance and that the investment is, in a way, approved by relevant authorities and stakeholders. The following environmental and social risks of the industrial complex, inclusive of WHAUP, are assessed and proper precautionary and mitigation measures were formulated. WHAUP abides by the requirements that are relevant to the Company as stipulated in the EIA report, and conducts continuous monitoring to ensure sustainable operations are achieved. Sustainable performances of business spin-off from responsible investment are detailed throughout the subsections of this report.

Environmental Indicators	Social Indicators
• Topography	• Land Use Planning
• Air Quality	• Transportation
• Ambient Noise	• Flood and Drought Prevention
• Soil Quality	• Waste Management
• Water Quality	• Socio-Economics
• Biodiversity	• Public Health and Hygiene
• Green Area	• Occupational Health and Safety

Supply Chain Management

Due to the nature of the business and service provided, WHAUP involves and interacts with many suppliers of diverse types. In 2020, there has been a massive shift in the ways the society operates due to the pandemic outbreak, international restrictions, market contractions, regulatory changes and uproar of online privacy; it is, therefore, more crucial than ever for businesses to implement a dynamic approach to its supply chain management practices. It is without doubt that WHAUP prioritizes the suppliers' environmental, social and governance management schemes. Suppliers are considered as collective representatives of the Company, therefore, their actions and reputations could ultimately influence the perception of stakeholders towards WHAUP's business. To oversee and regulate this challenge, WHAUP directs business operation based on a fair and transparent model, further enhancing supplier's competency to improve and grow sustainably together with the Company.

Management Approach

Currently, WHAUP has 231 suppliers across its supply chain, providing the Company with essential products and services that contribute to the business operations, such as raw water, chemical, laboratory and maintenance services. WHAUP's procurement and supply chain management processes are managed by the Procurement Department. Delivering high standards, competitive pricing and punctuality are key qualifications that WHAUP looks for in its suppliers. The Company strictly abides by the regulatory requirements and enhances sustainability, therefore, it is also WHAUP's priority to ensure that selected suppliers hold the same values and principles. WHAUP, thereby, adopts and communicates WHAUP's Supplier Code of Conduct to captivate the expectations and requirements for its suppliers. The Supplier Code of Conduct covers requirements on business ethics, fundamental human rights, occupational health and safety and environmental management. The Supplier Code of Conduct are communicated to all suppliers prior to commencement of work. In 2020, 100% of suppliers have been communicated and 25% of active suppliers in the Approved Vendor List (AVL) have signed acknowledgement to the Supplier Code of Conduct, respectively. WHAUP is continuously working to ensure that 100% of all active suppliers in the AVL will have signed acknowledgement to the Suppliers Code of Conduct by 2021.

New Supplier Selection

In the event that any of WHAUP's operation requires new goods or services that cannot be provided by the existing approved list, the Procurement Department will be responsible for conducting a supplier screening and assessment process. The screening and assessment process is in accordance with the Procurement Procedure, which is reviewed on an annual basis to ensure its applicability and appropriateness. For all new suppliers, it is required that the pre-qualification (PQ) form is to be completed. The PQ form comprises of general questions to assess the potential suppliers' qualifications in terms of product and service quality, price and capacity, as well as governance, environmental and social specific management systems for business integrity, safety, social and environmental impacts. This PQ form is the initial screening step implemented to reduce potential supplier-related risks, while providing confidence that the approved suppliers will conduct business responsibly. In 2020, WHAUP had one new supplier which were screened through the PQ form. This screening process helps assure that all selected suppliers in the AVL will conduct business in a sustainable manner.

Supply Chain Risk Management

Critical Supplier Identification

- Critacal suppliers are identified through Spending Analysis based on criticality of provided components or service, difficulty to substitute, etc

→

supplier sustainability risk assessment

- Suppliers' risks in terms of economic, environmental and social aspects are assessed and priortizied.

→

risk management measure

- Based on supplier risk profiles, appropriate mitigation measure will be carried.

Critical Supplier Identification

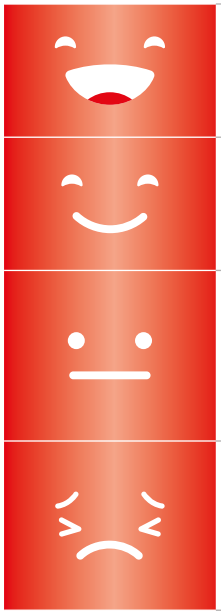
WHAUP's business activities can be disrupted or discontinued if some products or services cannot be offered by its suppliers. This makes these suppliers irreplaceable, making them a 'critical supplier' for WHAUP. To ensure the efficiency of its supply chain management, WHAUP has conducted an identification process to highlight these suppliers in order to manage them accordingly. Critical suppliers are identified through spending analysis (e.g. up to 80% of total purchasing value) as well as additional components including criticality of the component or services provided, difficulty to substitute as well as practices on environmental and social management.

In 2020, WHAUP identified ten critical suppliers, representing a 4.33% of the Company's total active supplier base, and covered up to 80% of its total purchases. With higher impact levels from critical suppliers, additional management measures are required to be implemented to mitigate the respective magnitude of the potential impacts through sustainability risk assessment and management approaches.

Supplier Sustainability Risk Assessment and Management

WHAUP conducts evaluation on a yearly basis to assess critical suppliers' risks associated with governance, social and environmental aspects. The evaluation is conducted by users of the suppliers' services, together with the Procurement Department. The suppliers' performances are assessed on the quality of products or services, price, delivery and cooperation. In addition to the aforementioned criteria, suppliers are also assessed whether they abide by the Company's policies and procedures and on their management practices on environmental, social, and governance (ESG) aspects. Upon completion of the evaluation process, the results along with corrective actions plans as appropriate for the scoring results will be informed to the suppliers. Alternatively, in the event that the evaluation results are poor for a period of two consecutive years, the suppliers will be notified and removed from the approved vendor list, and a written notice will be issued.

Supplier Performance Classification



Performance: Excellent
- Score range 80-100%
- Action: Supplier to complete self-evaluation every two year

Performance: Good
- Score range 60-79%
- Action: Supplier to complete self-evaluation annually

Performance: Fair
- Score range 25-59%
- Action: Supplier to submit ESG Corrective Action Plan and complete the action within6months period with re-audit.

Performance: Poor
- Score below 25%
- Action: Supplier to submit ESG Corrective Action Plan and complete the action within agreed timeline. Business contract shall be terminated if the supplier fails the re-audit.

In 2020, WHAUP started to conduct the ESG evaluation process for all critical suppliers through ESG onsite audits. WHAUP assessed the new supplier approved to AVL in 2020 and all ten critical suppliers. All assessed suppliers surpassed the evaluation criteria, with an average score of 83% in the 'excellent' performance range.

Furthermore, WHAUP took the onsite audit as an opportunity to train and share knowledge on economic, environmental and social practices to the suppliers, promoting a supportive culture. Training suppliers are the prevailing enables that create beneficial impacts both within and beyond WHAUP boundaries.

Supply Chain Initiative

"E-Procurement"

In 2020, WHAUP leveraged digital technology by adopting the phase 1 of the E-Procurement system. The system was developed to facilitate in-time efficiency, transparency and cost management for project bidding processes. Prospect suppliers are able to upload quotations to the system, streamlining the overall process, where responsible personnel can conveniently approve the quotation through the system depending on the project contract value. Furthermore, the system is also comprised of a comparative database to ensure that selected suppliers are within the competitive market range. In 2021, WHAUP aims to launch phase 2 of the system which will be incorporated with functions where users will be able to conduct PQ screening process, ESG audits and manage vendor list within the system. Moreover, the system will also enable automated bidding process where the pricing, analysis and award are conducted without manual intervention.

Customer Relationship Management

WHAUP puts customers at the forefront, valuing their trust and prioritize strengthening the relationships with them. The Company's commitment to be "Your Ultimate Solution Partner in Utilities and Power with Environmental Care" has inspired a customer-centric principle to be integrated in all aspects of the business. Delivering on this commitment, customer relationship management is considered as a foundation and core strategy that WHAUP prioritizes in order to generate long-term economic growth in the Company, as well as reinforcing the confidence of customers. The Company believes that by providing excellent customer service, the Company will maintain good reputation, and is crucial for its business successes.

As WHAUP operates within WHA Industrial Development (WHAID)'s industrial complex, the two entities share the same customer base. WHAUP represents Thailand's largest private provider for industrial water production and distribution, including raw water, process water, clarified water together with conventional and renewable energy. WHAUP plays a part in providing integrated solutions for customers within the industrial complex with its utilities products, therefore, plays a critical role in supporting WHAID to sustain its leading position at 32% of the industrial estate's market share.

Management Approach

With various types of customers and diverse requirements, WHAUP has implemented a customer relationship management approach, in order to cater for all customers' requests and concerns. WHAUP manages customer relationships through the Customer Relationship Management (CRM) System, a centralized and standardized system that houses all of the customer's information and requests. In 2020, research was conducted in order to prepare for a potential system upgrade into an application platform, which allows for more effective and prompt responses to customers' requests. The application is expected to be launched in 2021, aiming to further reinforce customer relationships and experiences.

WHAUP values and nurtures the strong relationships and trusts built with customers. One approach to strengthen customer relationships is through effective engagement in which WHAUP ensures that the communication channels are accessible, accurate and inclusive of all customers involved. WHAUP develops 'WHA Connect Newsletter' which contains details of the Company's news, activities and training programs, distributed to customers on a quarterly basis. Additionally, two-way communications are facilitated

through regular customer visits, phone calls, emails, club meetings and appointment of a focal personnel for attaining customers' concerns or requests. The Company welcomes and highly values each and every customer feedbacks and opinions received through aforementioned available channels and through website, as it is viewed as constructive opportunities for further improvement and growth. Feedbacks received are processed in accordance with the Customer and Public Complaint Procedure, where the respective Department Manager will be informed and a competent staff will be further assigned to investigate, address and document the filed complaints. The status of the complaint responses are reported to the Plant Manager, and subsequently reported to the managements during meetings.

Furthermore, WHAUP conducts an annual customer satisfaction survey to deepen the Company's understanding of customers' concerns, improve the services for seamless operation and ensure high satisfaction levels. The survey analyzes the customers' satisfactions toward the quality of provided services, products and of communicated news. The survey responses are consolidated and analyzed by the Customer Development Department. Once an issue has been identified, the department will determine the root causes and preventive actions to ensure no future reoccurrences, and in doing so, maintaining good relationships with its customers. The results are also communicated to the management levels through meetings, which will be applied when maturing business strategies for product and service development. In 2020, WHAUP received an average customer satisfaction score of 96%.

Customer Satisfaction Score

2018	2019	2020	TARGET 2021
96%	94%	96%	97%

Total Number of Customers Survey

2018	2019	2020	TARGET 2021
181	264	425	400

Based on the customer satisfaction survey results conducted in 2020 and complaints filed through the aforementioned communication channels and approaches, it was identified that the following areas can be improved to further enhance customers' experiences. All complaints have been resolved within due dates.

Key Area of Concerns	Mitigation Measures Implemented
Concerns regarding the quality of industrial water provided by WHAUP as customers observed that the water is stained in color after a long pause of use; e.g. long public holidays.	WHAUP has increased the number of flushes to the pipelines associated with the concerned customers to eliminate stagnant of water in the system.
Low supply pressure of the industrial water in some instances	WHAUP has made fine adjustments to the pumping system and pressure set point to prevent reoccurrence.
Consistency in supplying industrial water.	WHAUP investigated and found there was an incident where the pumping system had stopped unexpectedly. The system was quickly brought back to service.
Wastewater sampling at the customers' sites are conducted without prior notice.	WHAUP has informed customers that wastewater sampling are purposely conducted randomly in time. As such, the Company will only inform the customers 15-30 minutes in advance.

Customer Relationship Enhancement Initiatives

WHAUP commits to provide the best products and services to its customers. The Company prioritizes the development of new innovative initiatives to address this objective as detailed in the Innovation Management chapter. In addition to value-added services, WHAUP conducts the following initiatives to strengthen and enhance customer engagement.

Customer Clubs

Multiple customer clubs were established to closely interact with WHAID and WHAUP customers to address their interests/ concerns. Five customer clubs highlighted in 2020 include:

1. WHA Investor Club is opened for all customers, inclusive of WHAUP, that are situated in WHA Group's industrial estates. Members of the Club will receive monthly/ quarterly newsletters and invitations to attend variety of training seminars. In 2020, a total of seven (7) trainings and seminars were facilitated for the club members, including:

    - Industrial Waste-to-Energy seminar;
    - Japan External Trade Organization (JETRO) meet with Japanese Businessmen event;
    - Building Aviation Portfolio for 2020 Global Aviation Market webinar;
    - How to Work Remotely and Effectively while Away from Office webinar;
    - Post Covid-19 Strategy and Framework for Emerging Risks and Recovery Opportunities webinar;
    - ASEAN — Thailand Automotive Outlook post Covid-19 webinar; and
    - Accelerating 5G Network for SMART Manufacturing webinar.

2. Director Club was continuously hosted for the 12th year, which comprises of members at General Manager and Director Levels from international manufacturing companies operating in the Eastern Seaboard Industrial Estate. Activities conducted under this club includes monthly alternate factory visits and networking events.

3. Japanese Club is established for over 20 years which comprises of 150 Japanese representatives from factories located within the Eastern Seaboard Industrial Estate. In 2020, the Club organized monthly meetings, in which examples of meeting topics were on waste management, waste-to-energy and property tax transfer.

4. Eastern Seaboard Industrial Estate Human Resource Club (ESIE HR Club) was established in 1997 with the objective to regularly update members on labour related laws and news that are useful for completing human resource related tasks. The club is currently made up of over 250 factories operating within ESIE, where the members meet on a monthly basis.

5. Eastern Seaboard Labour Relations Club (ESLR Club) was established in 2005 which served as a central labour related information support platform for members focusing on the labour union, regulations and coordination/advice on any arbitration or matters related to labour agreements. The club is comprised of members from 135 factories located within the respective industrial estate, where the club meeting is conducted on a monthly basis.

INTERVIEWS SHOWCASING POSITIVE CUSTOMER RELATIONSHIPS

"Our collaboration with WHAUP has been a win-win situation for both parties. We foresee a bright outlook for the development of more solar energy projects in our region that is blessed with abundant sunshine"

Mr. Visarut Palarit,
Marketing Manager of Wisewoods Co., Ltd., reaping the benefits of cost-effective solar energy provided by WHAUP.

"WHAUP is responsible for the investment of the solar equipment, its installation and its maintenance. ZF Thailand is expected to be supplied by solar energy up to approximately 49% of its current energy consumption and reduce CO_2 emissions by 550 tons per year. We are delighted to collaborate with WHAUP in this exciting project. This fits in perfectly with our group's environmental objectives and we are grateful to WHA Industrial Development and WHAUP for giving us the opportunity to enhance our factory with this "win-win" agreement"

Mr. Thinus Steyn,
ZF Lemforder Head of Region South East Asia, India and Pacific for the Chassis Systems Business Unit.

Innovation Management

Innovation is at the heart of driving business successes. Innovation delivers benefits in terms of increased productivity, production of value-added products, enhance brand recognition, generate profitably and edge out competitors. With the current global trend on digitization, companies are also being pushed to utilize digital technologies to catalyze innovations, driving the business growth and adaptation to the market. Therefore, WHAUP ensures to embrace innovation management as one of the essential drivers to leap the Company towards achieving its business strategy to stay ahead of the competition. Innovations at WHAUP are kept up to date with the global trends as well as correspond with the customers' ever changing needs.

Management Approach

WHAUP adopts the innovation strategy defined by WHA Group which comprises of five key approaches including 1) Broadening internationally, 2) Extending product range through innovative and technology-driven solutions, 3) Establishing win-win collaborations with partnerships, 4) Maximizing synergies among WHA Group and 5) Digitalization. As a utility provider that complements the overall service solutions provided by WHA Group, WHAUP recognizes the advantages and benefits that innovations could potentially provide for its own business performance and also towards the whole group-wide portfolio. By that, the Company contributes and supports WHA Group's ambitious target through its effort to reduce cost for at least 1,000,000 Baht per year from initiating the SMART Metering. Innovation management at WHAUP is overseen by the Management Team and Operation Team.

Innovation Projects

Unified Control Center (UOC)

In 2020, WHAUP implemented an innovative upgrade to the Unified Control Center (UOC), specifically to the CCTV recordings. The CCTVs installed at the wastewater treatment facilities at WHA Eastern Seaboard Industrial Estate (WHA ESIE) are updated to have motion detection functions and control cable alarms. Therefore, the UOC can now detect and alert operators in the event of theft or trespassing. With this innovation, security guards were no longer required to make visits to monitor the assets as often, thus, helped to reduce air pollution and greenhouse gas emissions in the industrial complex. It also minimized the likelihood of safety risks from road accidents, hence, promoting the safety of all stakeholders relevant to WHA ESIE.

SMART Energy

WHAUP leveraged smart technologies to add value to its energy products, and generate the most benefits for its customers. In 2020, the Company continued to develop SMART energy solutions and micro grid systems under the Memorandum of Understanding (MOU) with the Provincial Electricity Authority (PEA). The objectives of this joint development is to potentially reduce electricity cost while increasing the energy within the industrial complex. The first project that will launch in 2021 is the Peer-to-Peer Energy Trading system. This enables industrial operators within WHA ESIE to conveniently buy or sell their generated solar energy via a smart energy trading platform that uses block-chain technology. The system, once fully implemented, will pave way for at least additional 50 MW of solar power available for use within the industrial complex, enabling industrial users to save more than 25 Million Baht per year and achieve over 1,000,000 tCO_2e reduction over the project life cycle.

SMART Metering

To enhance traceability of its provided utilities, WHAUP is developing various SMART Metering initiatives for its business. Firstly in 2020, WHAUP upgraded the analog water meters to generate digital outputs. The upgrade procedure is in progress. With this development, the volume of water used by industrial operators in the industrial complex could be conveniently and automatically generated for invoice purposes. If it is fully implemented, it will reduce the working hours of labors and associated expenses (especially fuel costs) that are initially required to manually retrieve such data. Working efficiency of labors is also improved and the resources that initially required will be used effectively elsewhere. Theoretically, the associated expenses would reduce by approximately 700,000 Baht/year. Out of this savings, actual fuels cost of 150,000 Baht/year would reduce. Additionally, WHAUP can be able to detect unusual water consumption behaviors, and address in a prompt response. Monitoring for potential water transmission losses and pin-pointing leakage events can also be done through this online metering system.

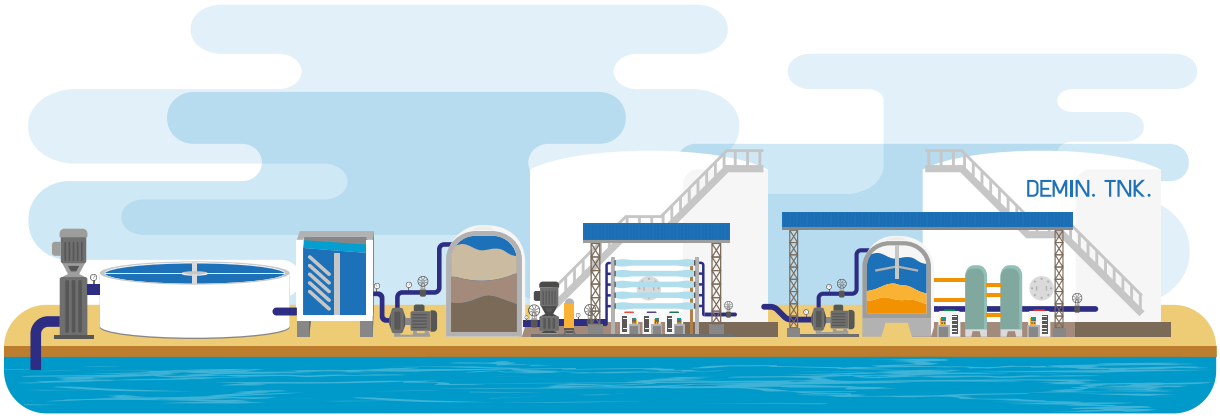
Similarly, such automated system was leveraged at the solar energy service. Solar energy consumption by WHAUP's customers are directly recorded and projected at WHA Tower for invoice purposes. WHAUP were able to reduce labor that were initially required to manually retrieve such output at the customers' site. This innovation causes the invoice process to become faster, and saved 3,000 Baht/MW/year from labor related expenses. WHAUP commits to a long-term target to achieve 300 MW by 2023. Therefore, the SMART metering will save 900,000 Baht/ year worth of labor related expenses.

Supervisory Control and Data Acquisition (SCADA) Technology at Wastewater Treatment Plant

WHAUP is currently conducting studies to optimize SCADA technology at its wastewater treatment facility located within the Eastern Economic Corridor of Innovation (EECi) in Wangchan district, Rayong province. This technological system can help monitor the wastewater treatment's performances on a 24 hour basis, thus, WHAUP can save cost from appointing on-site personnel. It is expected that the construction of such wastewater treatment plant along with the installation of SCADA technology will be completed in January 2021.

Demineralized Water Production

Since 2019, WHAUP invested to upgrade its current water reclamation process to produce demineralized water. The process is equipped with a membrane and ionic exchanged technology to further remove mineral components from reclaimed water. Demineralized water is utilized by industries, such as power plants, petrochemicals and electronics industries that aim to prevent machinery and equipment erosion from chlorine. Such demineralized water production process was implemented at WHA Eastern Industrial Estate (WHA EIE), which generated 55,000,000 Baht of revenue. In addition to adding value to WHAUP's current products, this innovation also helped reduce up to 1.5 Mm^3 per year of water withdrawal from natural sources. In 2020, WHAUP increased the demineralized water production's capacity by 1.6 Mm^3, making the total current demineralized water production capacity of the Company to be 3.1 Mm^3.

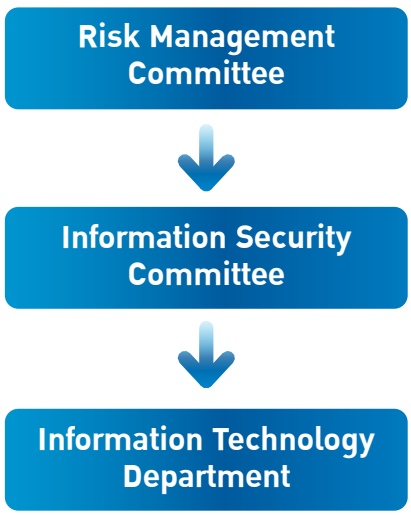


Data Security

With the increased global desire on digitization, technology is progressing at a rapid speed. Many companies are adopting digital transformation to remake their business to be more efficient and profitable. However, digital transformation comes with risks of cyber threats and requires proper governance, management and protection. Company data are considered one of the most important assets to any businesses. Cyber-attacks could potentially cause unauthorized access, damage, disruption or steal of information technology assets or sensitive data. This could ultimately lead to negative impacts towards the company reputation, financial disruption, losing customers and employees' trust, and in some cases, non-compliance, lawsuits or business disruptions. Furthermore, due to the new normal practices on remote working due to the COVID-19 pandemic outbreak in 2020, both the likelihood and impacts of cyber-attacks have escalated. WHAUP realizes that protection of its sensitive data is a foundation for running its business. By that, the Company ensures that its data security practices are well managed, up-to-date and effective at all costs.

Management Approach

Data protection at WHAUP abides by the Personal Data Protection Act (PDPA) B.E. 2562 (2019) and Cybersecurity Act B.E. 2562 (2019). WHAUP adopts the Information Security Policy, developed by WHA Group for all its business hubs, as frameworks to proliferate effective data protection. In 2020, the Policy was revised to incorporate PDPA requirements.



WHA Group Information Security Organization Chart

An Information Technology Department (ITD) was appointed to take holistic review of information technology security throughout WHA Group's business hubs, inclusive of WHAUP. The ITD is responsible for information technology (IT) system installation and maintenance activities. Furthermore, such department is also required to summarize all IT security events that were reported, including the types and details of the issues faced (e.g. place of occurrence, consequences imposed, immediate response conducted), root cause and mitigation measures implemented. The ITD reports directly to the established Information Security Committee that is made up of department heads, and responsible for approving policies and provide directions, perform key decisions related to data security and cyber security issues. The Information Security Committee subsequently reports to the corporate Risk Management Committee (RMC) biannually to ensure that risks related to information technology are fully captured. In addition, the ITD presents information security risks associated with WHA Group (inclusive of WHAUP) through WHA Group's quarterly RMC meetings, which are attended by a member that is knowledgeable and experienced about information technology. WHA Group's RMC then reviews, and subsequently reports to WHA Group's Board of Directors.

To enhance data protection, WHAUP will be using the information asset register, which was developed by WHA Group and endorsed by the Group's executives. This register is a centralized platform that stores all inbound and outbound data from four business hubs, inclusive of WHAUP. Utilizing this register will enable the ITD to detect potential sources of data leakage or cyber acts, and respond appropriately in a short period of time in the event of a cyber-attack. Moreover, WHAUP will conduct penetration and vulnerability test of its data systems by 2021. This assessment will instill employees' awareness towards the importance of data security. Additionally, WHAUP together with WHA Group have also developed a systematic application, in respondent to the PDPA requirements, which can track both internal and ext ernal breach cases including the extent of its impacts. Such application will be launched in 2021.

IT Business Continuity Plan

In the situation of the COVID-19 pandemic outbreak leading to remote working, it has opened opportunities for potential cyber-attacks. WHAUP applies WHA Group's Business Continuity Plan (BCP) that addresses response mechanisms in the event of IT crisis. The BCP includes security practices for employees when using online communication channels or when accessing the company's confidential data through online platforms and shared drive systems. Subsequently in 2021, the ITD will conduct business impact analysis of all in-placed information technology systems, and develop specific business continuity procedures for the respective systems.

Cyber Threat Response Mechanism

Cyber and confidentiality of information assets are governed by WHAUP's Code of Conduct and Practices. Any suspicions, grievances or breach cases on potential violations related to data protection can be reported via available channels, and responded in accordance with the whistle-blowing process as stated in the Codes of Business Conduct chapter. Furthermore, WHAUP will also be applying the Information Security Management Policy that was developed by WHA Group, and enforce to all employees in 2021. The Policy instates the procedures and responsible personnel for management and reporting of information security events in respondent to a reported breach case.

Cyber Security and Data Protection Awareness Campaign

To promote employees' awareness and understanding on cyber security and data privacy, WHAUP organized an annual training course that incorporates topics as verified by the Security Standards Council. Such topics include physical security, email security, password security, mobile devices, wireless network and security, workplace security and malware. Members of the ITD will receive a training facilitated by external experts once a year.

Performance

Collectively, WHAUP is continuously improving its data security management practices to ensure and contribute positively to WHA Group's established target of 100% data breach prevention in terms of data leaks, thefts or losses of both inbound and outbound data. In 2020, the goal was achieved.

Total Number of Complaints Received from Outside Parties an Substantiated by the Organization

2019	2020
0	0

Total Number of Complaints from Regulatory Bodies

2019	2020
0	0

Total Number of Identified Leaks, Thefts, or Losses of Customer Data

2019	2020
0	0

Society

- Human Resource Management
- Human Rights
- Labour Practice Indicators
- Talent Attraction and Retention
- Human Capital Development
- Occupational Health and Safety
- Community Development

Introduction to Human Resource Management

Human resource is a crucial factor for any business to grow sustainably and achieve business success. With the rapid transition in social and environmental changes, consumers' behaviors and preferences and the digital transformation; WHAUP focuses on actively improving its human resource management to be more efficient, and resilient in order to enhance the recruitment process and the retain-ability of current skilled employees. Nevertheless, WHAUP also values employees' engagement in corporate culture as an essential part of its success. Presently, with the increasing awareness of the social responsibilities and community considerations, society is becoming more diverse and inclusive, broadening the horizons in human resource management to be applicable for this changes in the workforce demographics and characteristics.

With this new perception, WHAUP is ceaselessly developing its human resource management system, in all respects, to make sure that the system is operating at the best of its ability. To do so, WHAUP puts immense efforts into the critical aspects of the system, being the talent attraction and retention process, human capital development, occupational health and safety, labor practices and human rights approaches. These human resource management efforts will ensure that WHAUP's employees are treated with fairness, their needs are being respected and their personal and professional growths are being enhanced whilst being a part of the Company.

WHAUP Corporate Values

WHA Group's corporate values are adopted at WHAUP; the Company promotes these values in all employees to act and perform their roles with inclusivity and harmony in the most effective ways within the Company. The corporate values include five elements: Advanced, Champion, Resourceful, Partnership, and Integrity. These elements are constructed in order to shape the employees' competencies and leadership skills. Ultimately, these elements become the major compositions in boosting WHAUP's business aspiration for digital transformation, and, in the long run, driving business achievements.

Human Rights

Every human beings are entitled to human rights. It is the rights inherited to every person since birth without distinction of any kinds (e.g. race, sex, language, nationality, religion, or political views). Despite this, many human beings across the globe are encountering violations or circumstances due to violation of human rights-related laws, international standards or commitments. Nonetheless, some human rights issues, which have captured the world's attention and pose substantial challenges to many business operations, are unsafe working conditions, restrictive freedom of speech, resettlement and relocation from improper land acquisition and use of illegal forms of labor from unsystematic recruitment processes. Furthermore, in the light of the on-going COVID-19 pandemic, many human rights issues have been put forward or intensified for instance, potential violations to employees' rights to health. With additional issues linked with human rights violation, businesses are stimulated to avoid the human rights risks and impacts, negative reputations, complaints from human rights' defenders and protests by right holders.

Management Approach

WHAUP recognizes the significance of these human rights circumstances and that it is crucial to protect its stakeholders, across the value chain, against the violations that its business could potentially cause. To start, WHAUP incorporated WHA Group's human rights due diligence and human rights risks assessment processes, as well as adopting the Human Rights Policy that extends to all levels of employees and external stakeholders. The Policy was made in accordance with international guidelines such as Universal Declaration of Human Rights (UDHR), United Nation Guiding Principles on Business and Human Rights (UNGP), United Nation Global Compact (UNGC) and the International Labor Organization's Declaration on Fundamental Principles and Rights at work. The Policy addresses non-discrimination practices, human rights violations against stakeholders, human rights risk assessment and due diligence, human rights promotion, human rights communication and reporting of violation cases. Moreover, the Policy was communicated to all employees by the Human Resource Department.

Consequently, in order to fulfill WHAUP's commitment to respect and protect the human rights of all of its stakeholders, the Company conducted human rights risk assessment as part of the respective industrial estate's Environmental Impact Assessment (EIA) study. Human rights risk indicators such as resettlement, socio-economic, environment, safety and foreign human capital associated with the Company's businesses were assessed with appropriate mitigation and monitoring measures from construction through to operation phases. Nonetheless, the human rights risk imposed by WHAUP's business activities have been identified as less severe than in other industries due to the Company's various efforts to tackle the issues, such as regulatory compliance, practice of public hearing and low numbers of foreign labors employed.

Grievance Mechanism

WHAUP values the unique perspectives and inputs of each and every stakeholders. Therefore, to monitor human rights violations, all stakeholders can access and report any potential human rights violation cases through WHAUP's whistle blowing channel, at which the information received will be managed as per the grievance mechanism process as detailed under the Codes of Business Conduct chapter. In 2020, no human rights violation cases were reported.

Human Rights Awareness

In addition to communicating the Human Rights Policy to all employees, the Human Resource Department is also responsible in designing human rights induction and training sessions and communication to build awareness for employees. As WHAUP strives to develop employees' understandings on human rights, the Company incorporates human rights training into new employee's induction program. In 2020, 100% of WHAUP's 34 new joiners received the orientation program on human rights. Facilitated with WHA Group, there were three organized orientation programs in 2020, altogether accounting for 12 total hours. For existing employees, a notice was sent out through internal SharePoint to inform employees of the Human Rights Policy along with other agendas to build awareness on human rights, including LGBTQ+, equality, discrimination, respect in office/ harassment etc. Attachment of the Human Rights Policy to the materials enable WHAUP to raise existing employees' awareness on human rights issues and serve as a refresher to revisit the Policy.

Labour Practice Indicators

The global economic fluctuations have caused the need for responses to tackle labor practice concerns, including unemployment or unfair treatment, leading to potential labor laws and regulatory changes. As a result, companies are continuously reforming its labor practices to prevent potential violations and negative impacts to their employees. Employees represent one of WHAUP's most important assets, therefore, maintaining good relations with employees through proper labor practices is essential to drive sustainable business practices forward.

Management Approach

WHAUP implements an Employee Regulation Manual as frameworks to govern its organizational labor practices. The Manual guides the Company to enhance its employees' prosperity, support fair treatment practices such as guaranteeing diversity, ensuring equal remuneration and compliance with labor laws and regulatory requirements. Nonetheless, labor practice management at WHAUP is overseen by the Human Resource Department.

Anti-discrimination, diversity and inclusion in the workplace are promoted and managed at all employment levels. By that, WHAUP has a Nomination Remuneration and Compensation Committee (NRC) that comprises of representatives from the Board of Directors. The NRC is responsible to perform duties to nominate qualified persons, with no limitations or discrimination regarding the gender, age, color, race, ethnicity, nationality and cultural background to serve as directors and top executives. Furthermore, the NRC is also in charge of the annual performance assessment to fairly and appropriately fix remunerations of executives that are in line with the market conditions. The NRC meets regularly, at least two times per year, prior to Board of Directors' meetings for further endorsement.

Diversity of Director to Executives Level by Age (Persons)	2018	2019	2020
< 30 Years old	0	0	0
30-50 Years old	3	3	5
> 50 Years old	4	4	2

WHAUP is aware of the business benefits from building a culturally diverse workforce. WHAUP ensures that all of its potential and current employees have equal opportunities and are not subjected to any unfair, discriminatory treatments.

All employees are provided with equal opportunities from a fair and non-discriminatory recruitment process through to career advancement that are assessed based on personal performances and achievements. Fair compensation are provided, in which an assessment conducted by external institutions were carried out to assure that the payments are competitive in the labor market. Moreover, employees are encouraged to express their opinions and propose suggestions on labor practices to the Welfare Committee, Human Resource Department or other provided channels (refer to whistle blowing and grievance mechanism as stated in the Codes of Business Conduct chapter). There were no reported cases regarding violations to labor related laws and regulation in 2020.

Talent Attraction and Retention

In today's society, there is a large-scale increase in business competitions, notably, in every fields and sectors across the business world. Highly skilled talents are wanted at every companies. Human resource is fundamentally one of the most important assets and drivers to any companies in gearing business successes. It is essential to WHAUP that the Company retains, and at the same time attract, the best talents suited for its business activities, opportunities, core values and corporate culture. Due to the nature of the Company's business, WHAUP requires employees with high expertise to carry out specific roles in different areas across the value chain.

Management Approach

Talent attraction and retention at WHAUP is managed by the Human Resource Department. WHAUP values the talents, and realizes the severity of the consequences resulting from high turnover rates. This includes potential loss of valuable knowledge and experiences, loss of morale from other remaining employees and that replacement is a costly and time consuming endeavor. Thus, the Company targets to maintain the total turnover rate at 8.5%, whereby the turnover rate of talents at 3%.

		2018		2019		2020	
		M	F	M	F	M	F
Employee Turnover Rate	Persons	4	1	11	1	8	3
	%	2.97	0.99	10	0.91	6.20	2.33
		Total		Total		Total	
Voluntary Employee Turnover Rate	Persons	4		12		11	
	%	3.96		10.91		8.53	

Employee Engagement Survey

WHAUP's culture gives high importance to employee engagement within the human resource management. For WHAUP, employee engagement is more than just knowing whether employees are satisfied with their jobs, but it portrays the level of commitments that they have towards the Company and its success. Every year, WHAUP conducts an employee engagement survey to analyze the results and works to improve employee engagement to potentially reduce turnover, and create a workforce that is satisfied, engaged and motivated to work and drive business on path to success. Starting in 2020, the survey was conducted by an external third-party company, NIDA, through the Employee Engagement on Meter (EMO Meter) methodology in order to ensure that collected data are truthful and unbiased. The survey assessed employees' satisfaction on eight categories including: communication, leadership, core value, career, teamwork, work support, work life balance and employee engagement.

Employee engagement survey is also one of the most important approaches to understand and act upon the employees' satisfactions and motivations toward the Company. The results were communicated to the Executives through various management meetings, and all employees could access the results via the internal Share Point. The survey was conducted to cover 100% of the total number of WHAUP employees.

Furthermore, WHAUP conducted various initiatives with WHA Group to correspond with its ambition to enhance employee engagement and satisfaction to the Company, including:

- In 2020, WHA Group has established the Facebook **"Advance Campaign"**, an internal communications platform, was launched. This platform allowed the Human Resource Department to be able to share information on SharePoint as well as share interviews conducted by Executives. The shared information will allow the employees to keep-up with the trend, and be aware of the business directions through conducted interviews.
- Annual Town Hall Meeting was conducted for WHA Group's business hubs, inclusive of WHAUP. The meeting was facilitated by WHA Group's CEO, which benefitted in keeping employees engaged and informed of the business strategies for the upcoming year.
- WHA Group leveraged digital technology to aid human resource management by developing an application 'At Work'. This is a centralized human resource communication platform for employees across all business hubs to conduct employee self-services and have access to e-application online and the company's announcements via mobile phones. In 2020, the application was used by a pilot group of employees, and satisfaction feedbacks obtained are 83%. The application is expected to be launched in the first quarter of 2021.

Performance

	2019	2020	2021 TARGET
Employee Engagement Score	89.2%	88.8%	90%
% of Total Employees Coverage	86.4%	92%	100%

Performance Review

WHAUP conducts annual employee performance review in accordance with WHA Group's developed Performance Management System. Such performance appraisal is conducted to analyze the employees' performances against their KPIs. Results from the review were incorporated as inputs to determine appropriate career advancement and remuneration package. In 2020, 100% of the employees have completed the performance review.

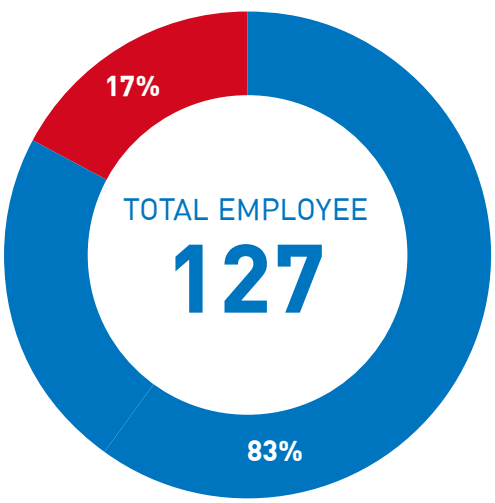
Collectively, insights from employees obtained from the engagement survey and performance appraisal are both analyzed to enhance human resource management and formulate meaningful development programs, job-rotation programs, pre-retirement plans and to fill internal job opportunities, as relevant.

Welfare and Benefits

WHAUP values all of its employees, therefore, every full-time employees will receive standard benefit package which consists of life and accident insurance, health insurance (for employee and their registered family members), annual health surveillance program, uniform, provident fund, and financial assistant fund. The Human Resource Department will communicate these rights to every employees at the start of their employment. When possible, WHAUP also tries to exceed the regulation requirement for these welfare and benefits. As such, a communication channel was set up for employees to propose suggestions on improvements of welfare and benefit package to the Welfare Committee and Human Resource Department. In 2020, employees proposed to the Company for training and development program (i.e. safety and effective communication program for site staffs, improve personal protective equipment safety forms and campaign for spending money and saving for sites staff).

Moreover, to enhance well-being and promote good-health, WHAUP arranged well-being activities and programs in 2020, which include fitness club, boxing club, Yoga club, Football club, Badminton club, etc.

WHAUP Workforce Profile



FEMALE

17.3%

22 persons
2020 New Hire +7
2020 Turnover rate +2.3%

MALE

82.7%

105 persons
2020 New Hire +25
2020 Turnover rate +6.2%

Human Capital Development

One of today's biggest challenges for many businesses is the ability to establish credible and reliable approaches that enhance human capital development. Additionally, integration of governance, social and environmental aspects into the frameworks for assessing suitable development programs also pose as another key challenge and opportunity. Many companies in the past have designed employee development programs through top-down processes. However, in the recent years, with the realization of the importance of employees' skills relating to market trends and opportunities, the approach for designing employee development programs were shifted to bottom-up process in order to proliferate maximum benefits. As a result, numbers of companies were driven to pursue new dimensions of human capital development programs. WHAUP visions its employees to be of a paramount factor for the Company to achieve business successes and sustainable growth. For this reason, WHAUP prioritizes human capital development in order to support its employees to reach their fullest potentials and capabilities.

Management Approach

All aspects of human capital development at WHAUP is managed by the Human Resource Department. WHAUP recognizes the importance of human capital development at all levels, thus provides a wide range of trainings and opportunities for career advancement or compliance in order to strengthen skills for potential challenges, and develop positive attitudes towards change. Various development programs were initiated based on global trends, as well as output from various engagement approach and performance appraisals. In 2020, WHAUP dedicated 490,000 Baht in people development, accounting as 4,000 Baht per FTE, and the average training hours is 20.63 per FTE for male and 12 per FTE for female employees. In 2020, WHAUP had HCROI at 18 times and also initiated its long-term 5 years goal to maintaining its HCROI rate at 22 times in 2021 and 27 times in 2025.

Human Development Programs

In 2020, the training programs implemented for WHAUP's employees, focused on five key growth areas including 1) Management skills development, 2) Business and digital knowledge development, 3) Soft skills development, 4) Technical skills development and 5) Talent management.

Management Skills

Business & Digital Knowledge

Soft Skills

Technical Skills

Talent Management

Management Skills Development

WHAUP's employees at management positions attended the 'Finance for Non-Finance' training program in 2020. The objectives of this course is for attendants to understand key financial principles and financial reports such as the Profit and Loss and Balance Sheets. The training was attended by a total of 28 group-wide participants, inclusive of 4 employees at Director-Manager levels from WHAUP. The number of participants met the targeted number of attendees at 28 personnel. The training was conducted over two consecutive days for a total of 12 hours altogether.

Business and Digital Knowledge Development

In 2020, employees from WHAUP participated in the 'Infographic Medias & Presentation Training Program', which was aimed to enhance the employees' presentation skills by effectively using infographics in PowerPoints. The program was facilitated over two sessions by Professor Kasiti Panthanom, Cityhubs Co., Ltd., in which each session was conducted over 12 hour's duration. The course was attended by a total of 32 group-wide employees, inclusive of 7 participants from WHAUP. Post training, the participants were required to develop/prepare their PowerPoint, and results portrayed that the employees were able to effectively use PowerPoint presentations.

Soft Skills Development

The following training program were initiated or organized with the objective to develop and enhance the employees' soft skills.

- Due to the COVID-19 pandemic outbreak in 2020, WHAUP together with WHA Group adjusted its human resource development training to suit the situation through online learning virtual course. Such training program is named 'Your Next You' which is organized by the SEAC Institute. The training aims to enhance employees' knowledge, capabilities and innovative mind set including design thinking, creative thinking blocker, growth mind set, outward mind set, recharge creative capacity and step-in-leader, etc. There were 33 employees that attended this training program, inclusive of 6 participants from WHAUP. The program lasted for 3 months in which participants were required to attend the online virtual course for no less than 30 hours in total. After the online course, the employees were required to write a final report how to integrate their mind sets and skillsets to benefit the Company.
- WHA Group organized a training session to enhance effective communication skills in order to be able to communicate effectively with potential business partners. The training activity was facilitated by Junlachai Junjua. The session was conducted for employees across four business hubs at senior supervisor to associate levels over two days, accounting for 12 hours in total. Altogether, there were a sum of 82 group-wide participants (the target number of participants was set at 85), comprising of 25 attendees from WHAUP. Post training session, communication skills from the workshop were practiced.

Talent Management

In 2019, WHA Group initiated the Leadership Development Program (LDP) for the 45 chosen potential talents from manager to director levels across four business hubs, in which 4 senior managers from WHAUP participated in the program. The program promoted the participants' necessary skills and capabilities to lead the organization through changes and disruptions. During the program, the potential leaders were engaged in enriching innovation project experiences which promoted start-up minds and customer-oriented mindsets. This helped to encourage an innovative workplace and enhanced innovative culture. In 2020, a 360 review, in collaboration with Thammasat University, was carried to formulate individual developments plans (IDP) that are catered for each of the successors' career pathways. This IDP supports the successors to define and pursue their career goals and ambitions.

Technical and Functional Skills Development

Employees ranging from managers to operators at WHAUP attended the safety training programs as required by regulatory requirements, such as occupational, health, safety and environment in workplace, working at height, confined space, overhead crane, electrical safety, annual fire drill and chemical substance management. Altogether, the training courses were attended by a sum of 181 participants from WHAUP.

Occupational Health and Safety

Managing health and safety is an integral part of managing a business. Occupational, health and safety (OHS) puts a care of duty upon every operators to make sure that both their employees and related parties, performing work on their behalf, work in reasonable conditions, and that OHS is a top priority. Protection of valuable human assets and their health are guaranteed to be more productive, thus, beneficial in driving companies to achieve business objectives and support sustainable growth. In the light of the recent COVID-19 pandemic faced in 2020, it is more crucial than ever that operators enhance its OHS management schemes. For this purpose, WHAUP recognizes that effective OHS management is needed in order to achieve their aim of preventing and minimizing the occurrence of accidents, occupational injuries and illnesses. WHAUP proactively protects the safety and well-being of employees, suppliers, contractors and visitors within its premises. This includes preventive controls to manage emergency incidents, trainings on safety standards and fostering an internal safety culture.

Management Approach

WHAUP strictly abides by the Occupational Safety, Health and Environment Act, B.E. 2554 (2011) and all related rules and regulations, as well as international safety standards to ensure effective OHS management practices. As WHAUP operates within WHA Group's industrial estates, OHS at the Company is overseen by the Group's Safety Department which is led by the Chief Operating Officer of WHA Group. Additionally, WHAUP also takes part in driving OHS management at a group-wide level by closely working and being a member of the Safety Committee.

The Company applies WHA Group's OHS Management System to manage health and safety risks throughout its operational business to achieve its zero incident goal for employees and contractors. The adopted Management System ensures that the Company can continually improve its safety performances and comply with the health and safety legislation and standards. Following the elements of the Management System, a risk assessment was conducted by the safety officers, holding an OHS certificate, to identify all hazards and risk factors that have the potential to cause harm to its people, and determine appropriate control measures to eliminate hazards and minimize risks associated with operational activities. The risk assessment is subjected for annual review or whenever there are changes to operational processes. Risk assessment results conducted in 2020, portrayed the following key risk factors.

Safety Risks	Description	Mitigation measures
Chemical exposure at water treatment plant	Chemical such as Chlorine and Sodium Hydroxide are used in water treatment process and therefore the employees are exposed to the chemicals at workplace.	• All employees are provided with suitable personal protective equipment; • Installation of Chlorine detector; • Conducts workplace monitoring annually; and • Provision of employees' medical health check annually
Risk of falling during solar rooftop installation	Workers are exposed to risk of falling from height when install solar rooftop.	• Ensures that before performing the tasks, all employees have been properly trained on how to work with height and the risks associated with it; and • Provision of personal protective equipment (e.g. safety harness) before performing the tasks.
Confined Space	Workers who perform work in confined space in water production/water treatment plant are at risk of being exposed to harmful gas, vapor, fume, or inadequate supply of air.	• Identify and evaluate confined space for potential hazards and accidents/incident and formulate suitable control measures (elimination, substitution, engineering control, administrative controls, personal protective equipment); and • Communicate/train workers before performing work in confined space.
COVID-19 Pandemic	The outbreak of COVID-19 pandemic could impact the health of WHAUP's employees, contractors, or those exposed to such risks.	• Application of WHA Group's established COVID-19 Procedure which prescribes precaution methods in order to ensure the safety of its employees and workers; • Comply with the regulations and recommendations on safeguarding against COVID-19 instated by the Ministry of Public Health; • Conducts regular sanitization of facilities with alcohol; • Checks body temperatures upon entrance to WHAUP's offices; and • Regular communication to employees on updated news regarding COVID-19 through email and internal SharePoint.

Unfortunately, there was one recorded work related injury case of a contractor performing work on behalf of WHAUP. The contractor experienced a cut, from a cutter device on his left thumb, during a solar cell cleaning task. The injured contractor received immediate medical assistance at Pluak Daeng Hospital with six stiches, and were able to come back to work to perform a different role. There were no reported cases of spill incident that occurred in 2020. Correspondingly, WHAUP commits to regularly and continuously improve the OHS system in order to prevent any past incidents from reoccurring, and achieve its target of zero incident goal.

Emergency Management

In case of emergency, employees can report all work-related incidents through event submission form, complaint form, or directly report to their supervisors. These cases will then be investigated according to WHA Group's Emergency Calls Process. Employees are highly encouraged to follow the protocol when an incident happens and in extreme cases, to be responsible for removing themselves out of the situation. Likewise, all of the incident will then be thoroughly reviewed by the Safety and Security Departments to protect employees from any reprisals and prevent future accidents from reoccurring.

WHA Group established an Emergency Control Center (ECC), which are located at nine of the Group's industrial estates to monitor and suppress emergency situations that occur within or near the industrial complex. The ECC is managed by occupational health and safety experts and equipped with fire control systems, ready to operate at any time. In 2020, the ECC stopped one emergency case at a factory located within the Group's industrial estate. In addition, the ECC also supported the local authority to suppress 12 emergency cases in the surrounding communities outside of the industrial complex premises.

Emergency Drills

Having operations within WHA Group's industrial estates, WHAUP participates in the Group's annual emergency drills for various potential incidents including firefighting and evacuation, hazardous chemical spillages, traffic accident, flood and emergency events related to factories within the industrial estates.

In 2020, WHA Group hosted a fire response drill at WHA Eastern Industrial Estate (WHA EIE) in which a total of 17 WHAUP employees participated in the drill. The drill covered training on advanced level firefighting. The review score for this fire drill is 100% rating for all processes (i.e. communication, equipment, personal protective equipment, reporting process, and timing), which demonstrates the success in raising employees' awareness on the potential risks as well as preparation in respondent to a fire event.

In July 2020, WHA Group hosted an emergency response drill for chemical spillage incident at WHA Eastern Seaboard Industrial Estate (WHA ESIE). More than 250 representatives participated from the Industrial Estate Authority of Thailand (IEAT) representatives, Department of Disaster Prevention and Mitigation, Department of Labor Protection and Welfare, local authority offices, local communities, local hospital, customers, the Group's employees, etc. There were 8 employees from WHAUP that participated in the drill. The responding measures performed during the drill include emergency reporting, first-aid, selection of appropriate personal protective equipment, order and control etc.

Safety Culture

With the aspiration to integrate OHS practices for all stakeholders, WHAUP takes part in providing training programs to educate relevant stakeholders about workplace safety. Training programs are developed based on the risk assessment and changes in legal requirements.

Following that, WHAUP provides and ensures that all of its employees receive suitable health surveillance programs on an annual basis. Furthermore, employees' access to medical services are ensured through provision of health and safety insurances. Nevertheless, WHAUP welcomes and encourages its employees to provide any suggestions on improving working conditions to their supervisors, Human Resource Department and Safety Department.

Safety concerns are important for WHAUP; it extends from its employees to the suppliers and contractors performing work on behalf of WHAUP. All suppliers and contractors are subjected to adhere to WHAUP's safety requirements, and surpass training course on the Company's environmental policy and relevant regulatory and safety standards. Those that have surpassed the training will receive a contractor card that will expire in one year from issuance date. Such training course was conducted in 2020 for 202 new WHAUP contractors and for 15 contractors with expired contractor cards. Contractors who perform short term works are also required to surpass the training to a one-time work permit.

To cooperatively enhance safety measures with its stakeholders, WHA Group established the Safety Club which is inclusive of WHAUPs' employees, contractors and customers. The objective of this Safety Club is for participants to share opinions and views on safety practices. The Club conducts quarterly meetings in which the latest was carried out in November 2020. During this meeting, there were a total of 240 participants, and the topics of discussion include traffic management, road safety, drug addiction/abuse control, first aid, cardiopulmonary resuscitation and benefits of community enterprise.

Community Development

With the world moving towards a sustainable economy, it is believed that a business will grow sustainably if it brings about development and prosperity to the community and society that it serves; their acceptance and trust are significant to the business's successes. WHAUP recognizes that its operations and business decisions may pose potential impacts to the surrounding communities and the wider environment. Additionally, due to the nature of its business, resource-sharing and conflicts between the Company and the communities may be unavoidable. WHAUP values harmonization and the importance of gaining acceptance from its local communities. In order to achieve its vision of becoming Thailand's most admired utility service provider, WHAUP recognizes its responsibilities to give back to the society and contribute to the development of its surrounding communities.

Management Approach

WHAUP adopts WHA Group's corporate social responsibility strategy, and continues to engage with its neighbors and the society through various sustainable programs that focus on education, community and the environment development. The programs are created with the community's needs in mind, identified through relevant Environmental Impact Assessment (EIA) studies, social engagements and feedbacks received directly from the community members. Communities' needs, feedbacks and concerns are attained through various social engagement approaches and established communication channels including, whistle blowing, phone calls, emails, engagement activities, surveys and appointment of local community representatives (see information of response mechanism under Codes of Business Conduct chapter). Furthermore, as part of WHA Group's Corporate Social Responsibility (CSR) Committee, WHAUP actively participates in monthly meetings to formulate appropriate community development initiatives, and reports to the Board of Directors.

WHAUP prioritizes community development, especially those residing near the vicinity of its operations. In 2020, WHAUP together with WHA Group conducted various corporate social responsible initiatives with the communities residing within near vicinity at 5-10 km of the industrial complex. WHAUP contributed 17 million Baht to WHA Group's corporate social responsibility (CSR) and a total of 900 employee working hours were contributed towards implementing the CSR initiatives. Altogether, there were a total of 191,585 people from 159 surrounding communities to all 100% of WHAUP operation and WHA Group's industrial estates that received benefits from such community development projects.

Education Development Projects

WHAUP contributed to WHA Group's following implemented development projects that focused on educational development for community members at all ages.

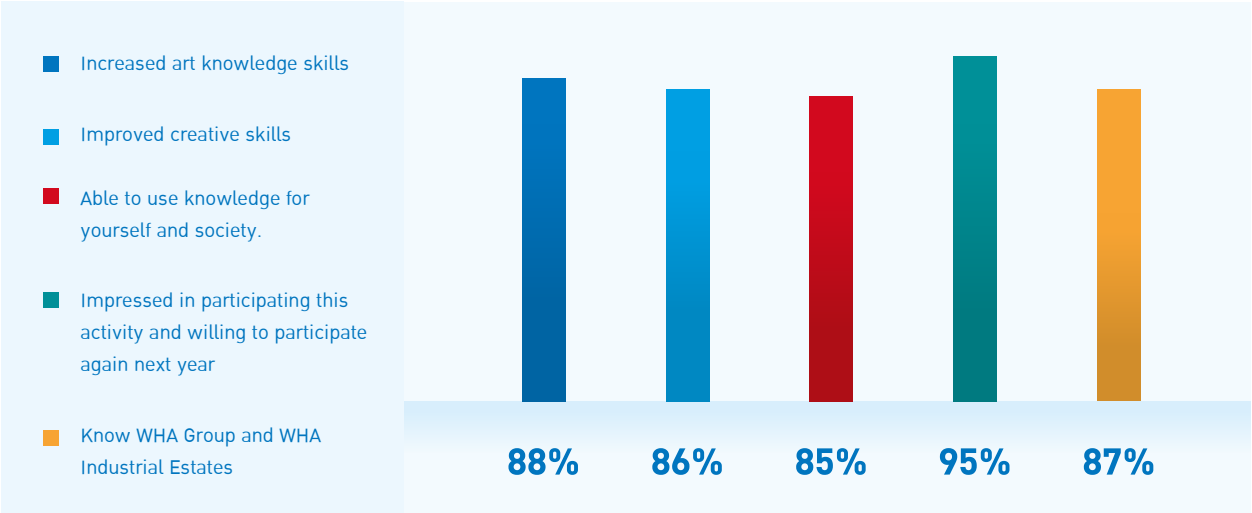
Art Camp for Students

The 12th WHA Art Camps took place in 2020, at the hometown of primary school students from Rayong and Chonburi. The first Art Camp is dedicated to students from upper elementary school, and focused on activities that allow students to learn basic art knowledge. Environment conservations, history, and local culture teachings were also incorporated into the curriculum as well. The second organized Art Camp is for junior high school students, where the students got to meet peers from various schools and participated on field trips together. Despite the pandemic crisis, WHA Group continued to make a difference in these students' lives by supporting education through art in order to help with self-development and other necessary skills.

Altogether, there were a total of 563 students from 20 upper elementary schools and 29 students from 6 junior high schools that attended the programs. The satisfaction score from the survey conducted during the Art Camps were 88% and 93%, respectively, demonstrating that students were satisfied with both programs. The majority of the students felt that the program enhanced their basic art skills, and that the knowledge gained can be useful for daily lives. The programs were successful in promoting and exceling education for Thai students which is vital to the development of communities and the country as a whole.

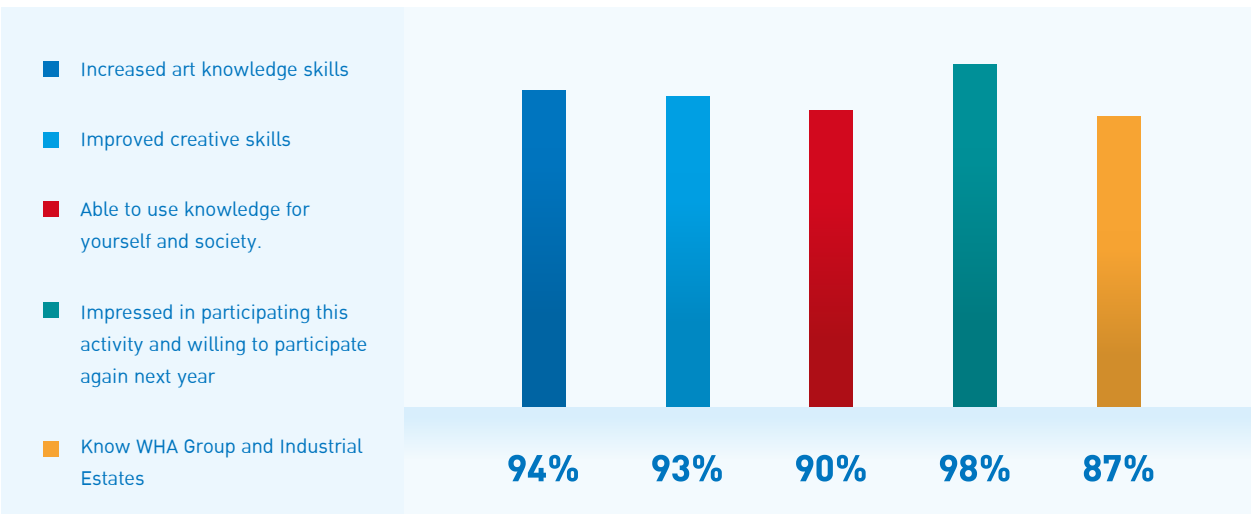
The satisfaction survey 2020 Art Camp in Home Town:

532 students from 19 schools in Rayong and Chonburi
July – August 2020



The satisfaction survey 2020 Art Camp Trip:

29 students from 8 schools in Rayong and Chonburi
14-16 September 2020



Teacher Fellowship Program

Our society is faced with issues from the lack of qualified teachers. Thus, WHA Group and WHAUP supported the schools within WHA industrial premises, in Rayong and Chonburi provinces, by providing a total of 1,260,000 Baht funds for teachers from 7 different schools in the area.

Scholarship Awards

Children represent the future workforce and are the drivers of the nation. WHA Group and WHAUP recognize that some students, despite being very talented and skillful, may not be able to pursue their educations to their fullest capabilities due to certain financial constraints. The Group and WHAUP, therefore, consider educational support as an important scheme for the community development. WHA Group and WHAUP aspire to assist youth in having the opportunity to develop their competency and potentially improve their quality of life. Hence, WHA Group and the Company continuously provides educational support through scholarship funds for students to attend vocational trainings. Ultimately, nurturing the competent youth from the initial steps. Presently, WHA Group has given 79 scholarships to students, with the total funds of 727,600 Baht. In 2020, there were 22 students participating in these scholarship programs.

WHA Group School Contribution Program

For the 23rd year, WHA Group, in collaboration with over 50 companies in WHA industrial estates, helped students from low-income families use education as a stepping stone to improve their quality of life. Through practical donations, WHA Group's Annual School Contribution Program continued to make positive impacts on the neighboring communities and society.

For five days during the month of July, WHA Group and WHAUP executives visited 50 schools and 15 child development centers in the vicinity of WHA industrial estates to deliver much-needed supplies and sports equipment for the mental, physical, social and academic development of 20,400 children. Each child received backpacks, notebooks, pens, pencils, crayons and other basic instruments for creative and educational learning in and out of the classroom. Due to the pandemic alcohol gels were also distributed to all schools to ensure that teachers and students protect themselves against and prevent the spread of COVID-19.

"For over two decades, we have successfully shared with our employees, management and customers from the different industrial estates to join this worthy program. This reiterates our belief that together, we can help bring change through education. We would like to thank all our sponsors for their generous support throughout the years."
- Mr. David Nardone, Group Executive Industrial and International of WHA Industrial Development PLC and Director of WHA Utilities & Power PLC.

Community Development Projects

To enhance the livelihood of the community, WHAUP has contributed with WHA Group to implement the following projects in 2020.

Mobile Medical

Mobile Medical Unit was a key health approach utilized to improve access to health care services in remote areas. WHA Group and WHAUP recognize the direct correlation of good health and livelihood of the community, therefore, have organized annual Mobile Medical Units to reach out to neighboring community members within the WHA industrial estates premises in Rayong and Chonburi. Provision of vaccines to prevent influenza and bug-out bags/survival kits were distributed to community members to support the members to live healthier lives.

In 2020, WHA Group and WHAUP provided the community members with vaccine doses for influenzas as follow:

- 400 of vaccine doses were given to community members in the Khao Khansong Sub-District, Chonburi province
- 400 doses were given to community members from Chom Phon, Chao Phra Ya Sub-district, Rayong province.
- 300 doses were given to community members from Bo Win Sub-district, Chonburi province.
- 280 doses were given to community members from Pluak Daeng District, Rayong province.

Additionally, WHAUP together with WHA Group provided the bug-out bags/survival kits as follow:

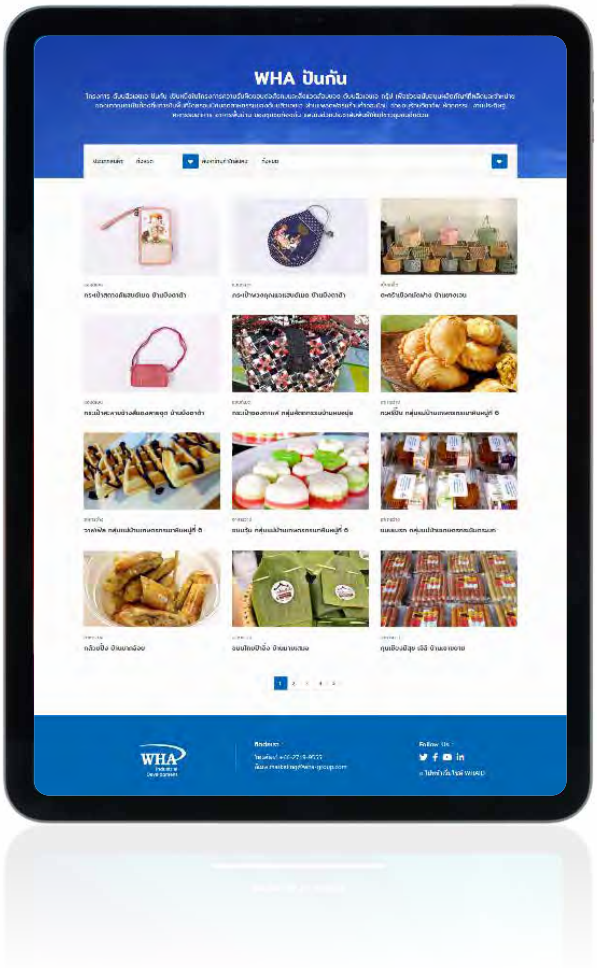
- 90 of bug-out bags/survival kits were provided to the community members from the Tasith Sub-district, Rayong province.
- 15,000 THB worth of bug-out bags/survival kits for bedridden patients were given to the community members from Pluak Daeng District, Rayong province.

Sponsor of Thermometer Robot

In addition to the financial aids given to the Faculty of Medicine of Siriraj Hospital and Ramathibodi Hospital to help those affected the most by the COVID-19 crisis, WHA Group, inclusive of WHAUP, sponsored two “CU-RoboCovid”, a thermometer robot created by the Faculty of Engineering, Chulalongkorn University. The thermometer robot, also known as “Pinto” robots, are robots used to assist doctors and nurses with their tasks to detect COVID-19 cases. Moreover, through the Tele-presence System, doctors, nurses, and patients were able to communicate to each other through the robots, therefore, limiting face-to-face interactions and the further spread of diseases. These technological advancements hence reduce the risks of infection, safeguarding numerous medical front liners.

Cooperation with Customers

WHAUP, WHA Saraburi Industrial Land (WHA SIL) and WHA Rayong Industrial Land (WHA RIL), together with its housed customers, have established a Community Relationship Committee. Members of the Committee cooperatively collect funds to conduct social development programs to enhance the surrounding communities’ livelihoods. There are currently 64 members in WHA SIL’s Community Relationship Committee with a shared budget of 30,000 THB/member/year from the participating factories, and 23 members in the WHA RIL’s Committee with a shared budget of 23,000 THB/member/year. In 2020, altogether 2,462,000 baht of funds were collected and allocated.



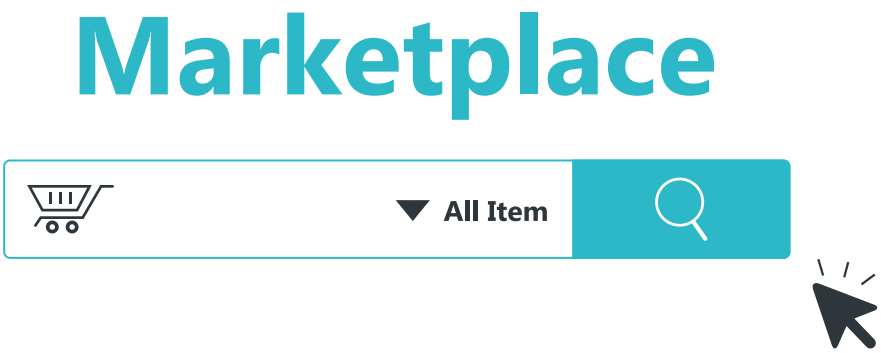
PAN GAN Project

In 2020, WHA Group launched PAN GAN, an online marketplace to promote and sell homemade products and homegrown specialties made by people residing around 9 of WHA Group's industrial estates in Chonburi and Rayong provinces.

The new website, pangan.wha-industrialestate.com/en/home, aims to link sellers with shoppers, by offering a showcase of products in different categories ranging from handmade crafts and traditional medicines to local food items and homemade delicacies.

The program was welcomed by micro-entrepreneurs, food producers, small cottage industry owners and housewives, who were invited to join, so that they could promote and sell their products to a wider market. WHA Group's Corporate Social Responsibilities initiative encourages job creation and local economic development. For many households, this opportunity represents a new source of revenue or side income to uplift their lives and secure a better future for the youth.

In addition, it is also a way of preserving the community's heritage and passing on the art of handicrafts and specialty food products from different hometowns. It focuses on creating value based on local traditions, the availability of agricultural products and natural materials, and the handing down of skills from one generation to the next.



Surmounting Challenges of Covid-19 Pandemic

While our society has experienced many surprising events, no one has predicted that a pandemic will occur in 2020. COVID-19 has shaken the world in many unprecedented ways, and its repercussions are still difficult to assess. The pandemic has brought adverse impacts toward physical and psychological health of countless individuals, families and communities in Thailand. Its impacts also extend beyond public health to economic and financial status of the communities, especially the most vulnerable within our society. WHAUP has reached out and is actively involved in helping the vulnerable and other community members around its operations. As a result, the Company has deployed numerous initiatives to adjust to the situation and support those in need.

- **Tackling the COVID-19 Crisis Together**

To help protect medical front liners bravely serving COVID-19 patients at Ban Khai Hospital, WHA Group donated a much-needed negative pressure cabinet Built to prevent the proliferation of germs and viruses, it is crucial for reducing the risk of infection among patients and medical staff. Food packs were distributed to vulnerable families with limited access to food or who suffered economic consequences as a result of the pandemic. In conjunction with Thai Red Cross Rayong Chapter and Rayong Hospital, a blood donation event was organized to ensure that blood supply is always adequate and ready for those in need.

Over at Aor Bor Tor Nong Sua Chang community, WHA Group representatives provided care packages containing first aid kits, adult diapers, soaps and basic medicines to senior citizens and those who suffer from limited or impaired mobility. They also participated in a clean-up activity in Ban Khai district, creating a stronger bond with local residents through environmental awareness.

- **Supporting Local front Liners and First Responders**

The Company handed over 1,000 Personal Protective Equipment (PPE) suits to Ramathibodi Hospital to be distributed to hospitals nationwide. In addition, over 5,000 KN-95 masks were also given to various provincial health administrations and hospitals across the country to ensure that medical staff members are properly protected from catching the virus. A substantial amount of money also went to help and feed front liners who bravely and selflessly performed their duties.

- **Helping the Community Observe Health and Safety Protocols**

WHA Group teams were also busy distributing KN-95 masks and hand sanitizers to Pluakdaeng Hospital in Rayong, the Pattaya Administrative Office and other public institutions in the Eastern Economic Corridor. They also went to Maenamkoo district in Rayong to provide support for the manufacture of masks for monks and villagers.

Since the start of the outbreak, the company has been distributing hand sanitizers to 65 local schools, as well as hospitals, healthcare centers and provincial administrative offices. In addition to this donation, WHA executives and staff also reached out to schools and child development centers to promote personal hygiene and health awareness through interactive games to keep students safe as schools reopen.

Food donations, consisting of nutritious food packs and freshly cooked meals were also arranged through a giving back program called We Care for Nong Kae for the province of Saraburi to relieve the impact of COVID-19 on vulnerable residents of the nearby communities.

WHA E-Job Market

In 2020, WHA Group collaborated with public companies and industrial operators within the Group's premises, in Rayong and Chonburi, in organizing "WHA E-Job Market" Project. The project aims to increase the hiring rate for the surrounding communities in the time of COVID-19 pandemic by offering jobs within the industrial premises. There were 149 job positions/roles opportunities and 400 community members submitted their applications through this project.

Environment Development Projects

As a provider of water services, WHAUP focuses on community development programs that are related to water stewardship. Apart from the robust and effective water management schemes implemented within WHA Group's industrial estates, WHAUP also collaborates with the Group to engage with local communities within near proximity to resolve water related concerns through the following projects.

Clean Water for Planet

Following this ambition, the 'Clean Water for Planet' program was conducted for the 4th consecutive years in 2020. The program aims to provide clean water for local communities to promote their quality of living and raise the publics' awareness on protection of its vital water resource. The following initiatives were conducted to achieve the program's objectives.

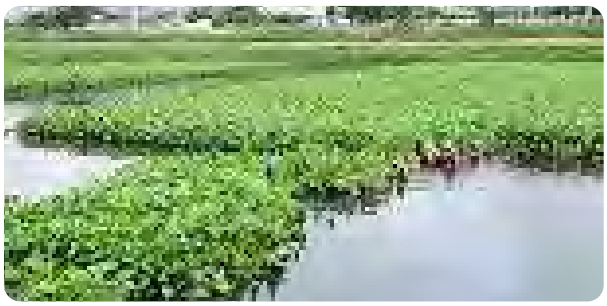
1. **Training courses for students and knowledge-sharing with local organizations**
   Collaborating with Chulalongkorn University, WHAUP offers training courses on water conservation and wastewater management to engineering students. Every year, WHAUP will offer internship programs for university students to gain newfound knowledge from the Company's expertise and specialization in wastewater and water management services. In 2020, there were 7 students participating in the internship program.

2. **Learning centers to tackle environmental issues within WHA Group's industrial estates**
   In 2020, there were a total of 8 visitors' groups that visited and observed WHAUP's expertise in wastewater treatment at the constructed wetland project. The visitor groups comprised of provincial governmental authorities, representatives from Industrial Estate Authority of Thailand and local members.

3. **Providing Clean Water for Local Communities**
   One of the greatest achievements from this program, to-date, is the completion of a constructed wetland system that was delivered to Pluak Dang Sub-District Office in Rayong province. See the overall treatment process of the wetland system in the Water Management chapter. Moving forward, WHA Group has established a plan to develop similar sustainable wastewater treatment system at Nong-kla municipality, Chantaburi province. The system is estimated to treat up to 800 cubic meter of wastewater/ day. WHA Group sees the two-way benefits of this project as it provides the Nong Kla communities with access to clean water source, and the Group can reserve such water supply as backup in the event of droughts. Construction will begin in 2021.

Overall, the Clean Water for Planet Project received the FIABCI- Thai Prix d' Excellence Award 2020 in the Environmental (Rehabilitation/Conservation) Category for its tremendous results in the overall environmental impact and benefits to the local communities around WHA Group's industrial estates.

Water Hyacinth Project



To generate additional income flows toward the local communities, WHA Eastern Seaboard Industrial Estate (WHA ESIE) and WHAUP implemented an initiative for its surrounding community in the Baan Kai District, Rayong province in 2020. The community can take unwanted water hyacinths from WHAUP's wastewater polishing pond at WHA ESIE on a monthly basis without charge, and use for producing and selling straw woven baskets. This helped the community generate income, save cost from purchasing such water hyacinths that is approximately 80-100 Baht per bundle or 100 strands, and have a secure source of raw material on a monthly basis. Coherently, WHA ESIE was able to save approximately 15,000 Baht per month on contractor expenses for removing such water hyacinths. In addition, WHA ESIE designed and provided the community with dryers that cost altogether 50,000 Baht to further improve the woven basket's quality in terms of moisture content, extending the product's life span. Furthermore, the Group supported this business by purchasing 300 woven baskets from the local community to make use as new year gifts in 2021, in which the recipient portrayed satisfaction towards the gifts received. This contributed to 120,000 Baht of income to the community. In addition, the woven baskets are also promoted and sold via WHA Group's PAN GAN online market place. By purchasing and making use of the woven baskets and other goods sold through PAN GAN as new year gifts, WHA Group were able to save 25% of expenses compared to purchasing from other sources.

Tree Planting Project

WHA Group, together with the local authorities, industrial operators and communities, conducted a Tree-Planting Project to restore the ecosystem and promote biodiversity at the Khao Kheow Chomphu Wildlife Sanctuary in Chonburi. The Group supported 30,000 Baht to purchase 1000 seedlings that were planted within an area of 7-00-88 Rai in the Sanctuary.

Furthermore, WHAUP also participated in a reforestation project with WHAID and community volunteers to plant 200 samplings of indigenous trees such as afzelia xylocarpa, lamduan, and mahogany at a tropical forest in Bo Win sub-district. Students of Ban Khao Hin School in Chonburi were also invited so they could learn the importance of trees to the ecosystem and the impacts of climate change on daily lives. Aside from offering shade, healthy trees provide oxygen and minimize carbon in the air, while providing food and shelter for wildlife, and maintaining favorable water and soil conditions.

Another activity on the green agenda was teaching children about recycling and practicing environmentally-friendly lifestyle. WHA group's employees delivered color-coded trash bins to the Ban Phan Sadet Nok School in Sri Racha, Chonburi, and explained to the students the concept of sorting and recycling to keep the planet clean. The young students participated in interesting discussions on how to sort waste materials and listened to suggestions and tips concerning waste reduction and reuse. Sharing the importance of doing good deeds for nature and the environment can start at a very young age.

Marine Ecosystem Preservation

WHA Group's employees, along with WHAUP, had a chance to visit the local communities on a 2-day Community Visit event, in Toei Ngam Beach, Sattahip Naval Base in Chonburi province. Together with the community leaders and local residents, WHA Team visits the site in order to learn more about how to protect and preserve Thailand's tropical ecosystem. The overviews were given by the Royal Thai Marine Corps'. The first initiative launched on-site was the mangrove forest planting project. WHA Team also got an opportunity to participate in environmental-related activities along with the community members such as releasing baby nurse sharks back into sea, an activity aiming to contribute to the balance of nature. Moreover, the community members also joined in the planting of coral, using artificial planting beds. Corals are home to fish and other sea creatures, therefore, increasing the amount of live coral under the sea will increase the biodiversity of the fish population as well.

"Ecological balance is very important for coastal communities to survive. They depend on the sea for a stable supply of food and a source of income. Enhancing awareness for preserving marine life is necessary for the well-being of the people and can lead to positive impact on different communities"

Environment

- Environmental Impact Management
- Biodiversity
- Water Management
- Waste Management
- Air Emission
- Climate Change
- Energy Management

Environmental Impact Management

It is WHAUP's priority to ensure that its business operations, surrounding communities and the environment exist sustainably together and in harmonization. In this light, WHAUP gives great importance to its environmental management and resource conservation that is pragmatic and sustainable, applicable to the nature of its business operations and activities; for instance, an active management and monitoring of wastewater quality.

WHAUP adopts and strictly adheres to WHA Group's Environmental Quality, Energy Conservation and Biodiversity Policy. The Policy provides a framework for WHAUP's commitments to reduce its environmental impacts while maintaining and continuously improving its quality, regulatory conformances and align practices with international standards including the International Organization for Standardization (ISO) 14001 Environmental Management System and ISO9001 Quality Management System.

Environmental Standard and Performance

Environmental Management System Certificate

In highlight of WHAUP's operational practices regarding environmental management, the Company was certified in accordance with international standards, specifically the International Organization for Standardization (ISO) 14001: Environmental Management System.

Environmental Impact Assessment (EIA)

WHAUP's business operations are located within WHA Group's industrial estates. In order to adhere to the requirements and conditions indicated by the Promotion and Conservation of National Environmental Quality Act, B.E. 2535 (1992), all environmental and social impacts consequent to WHAUP's projects are assessed under of the situated industrial estate's Environmental Impact Assessment (EIA) study. The boundary of the EIA covers the environmental and social impacts within a 5 kilometers radius of the industrial complex. The EIA is subjected for approval from the Office of Natural Resources and Environmental Policy and Planning (ONEP) prior to proceeding with the project construction, commencement and operation phases. WHAUP ensures to comply with the EIA requirements, specifically the measures relevant to its business operation such as water management and wastewater quality monitoring. The performances from management and monitoring practices are consolidated and reported to the Industrial Estate Authority of Thailand (IEAT), Natural Resource and Environmental Policy and Planning, local provincial offices on a bi-annual basis, covering the periods of January-June and July-December, respectively. In 2020, there has not been any identification of non-compliant cases of environmental-related laws and EIA requirements. Despite the COVID-19 outbreak in 2020, the crisis did not affect the process for environmental monitoring.

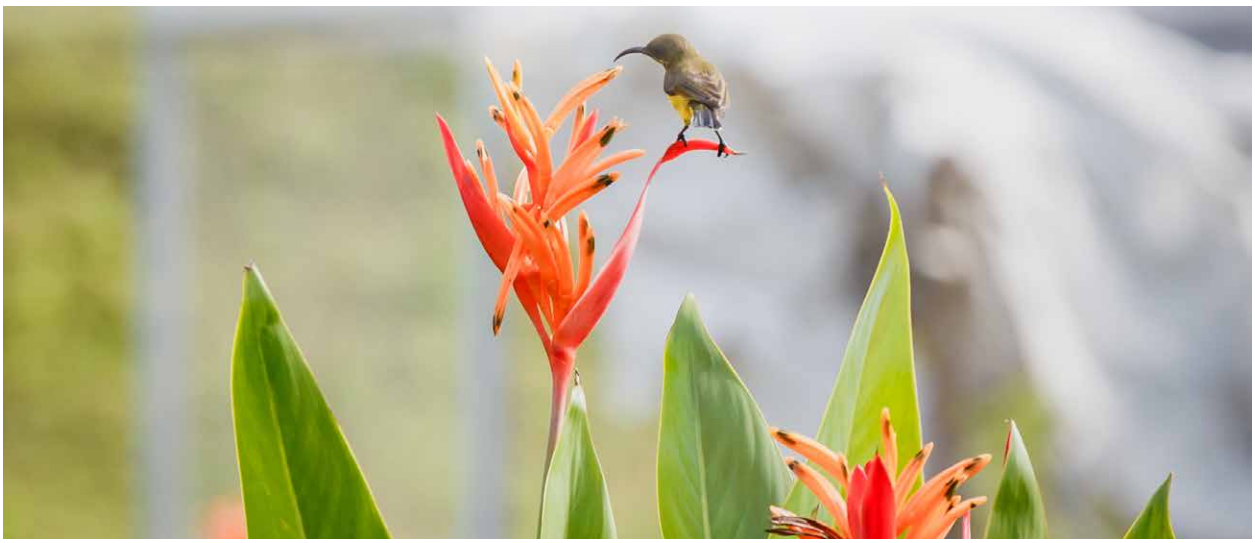
Real-Time Water Quality Monitoring Station

Wastewater quality treated at WHAUP's wastewater treatment process are monitored prior to discharging to natural sources through the Real-time Water Quality Monitoring Station (WQMS). The monitored parameters are organic substances, chemical oxygen demand (COD) levels and bio-chemical oxygen demand (BOD) levels. The real-time monitoring results are projected at WHA Group's Unified Control Center (UOC). Additionally, the monitoring results are also broadcasted instantaneously on the Company's website that is accessible by the public. The main driver for developing this system stemmed from the regulatory agencies wanting to publicize real-time results publicly, thus WHAUP is dedicated to be transparent with its environmental results. In the case of non-compliance with relevant standards, an alarm will be sent to relevant operators in order to conduct immediate remediate actions in a timely manner. In addition to projecting wastewater quality monitoring, the UOC also controls the performances of equipment operated at both the raw industrial water and wastewater treatment facilities to ensure that the thresholds are met prior to supplying to end-users or discharge into public waterways.

Environmental Complaint Handling Process

Following WHAUP's continuous efforts to improve the environmental management system, environmental related complaints channels were established for stakeholders to submit any environmental related complaints and concerns. The stakeholders are informed of the channels and instructed on how to access these channels. The complaint handling process is in accordance with the guidelines prescribed under ISO14001:2015 where root causes will be identified, and appropriate preventive and mitigation measures will be implemented to prevent future occurrences. Complaint cases can be reported via telephone, WHAUP's website, through employees or directly to the Complaint Centre that is situated at every industrial estates managed by WHA Group. No complaints relating to WHAUP's business were raised in 2020.

Biodiversity



Due to the nature of the business operation, WHAUP is aware of the potential impacts it may pose towards the loss of biodiversity from the local ecosystem. Operational activities ranging from construction of utility infrastructures, water withdrawal and discharging and the use of power supply could, altogether and potentially, cause negative impacts on the living organisms, species and its habitats in the surrounding premises. Hence, it is WHAUP's responsibility to protect the wider environment that it operates in, minimize possible impacts to biodiversity in the local areas and ensure that the ecosystem continues to flourish.

Management Approach

WHAUP tackles the biodiversity protection by adopting WHA Group's Environmental Quality, Energy Conservation and Biodiversity Policy which emphasizes the Company's stance for biodiversity conservation throughout the value chain. Furthermore, WHAUP applies the management approaches that are in line with regulatory standards and the Environmental Impact Assessment (EIA) that was conducted for the industrial estates that its operations reside in. The assessment takes into account specific details such as the type of operation, size and proximity from protected areas and the geographical locations of the project, in order to identify all potential environmental and social impacts imposed within a radius of 5 kilometers. The EIA also encapsulates all biodiversity related risks associated with the respective industrial estates and utility process from construction through to operational phases. Identified risks or impacts are then used as input to determine systematic management and monitoring practices for biodiversity protection. WHAUP is the direct responsible business for water and wastewater treatment systems in the Group's industrial estates, therefore WHAUP strictly ensures water and wastewater stewardship against biodiversity protection are aligned with relevant regulatory and EIA requirements.

Biodiversity Protection Measures

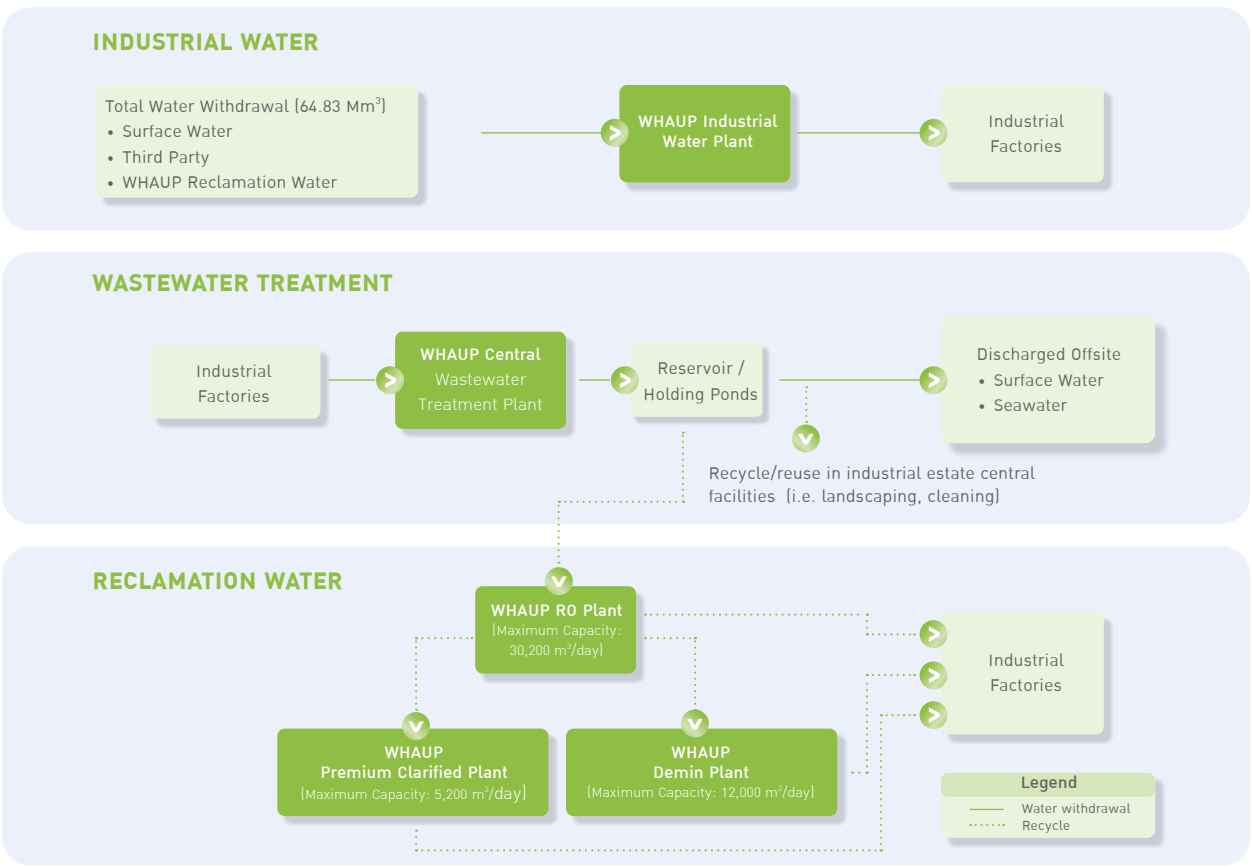
In an event where there are identified high-risk biodiversity impacts in the area, mitigation measures will be determined in order to protect and preserve the surrounding ecosystems. Based on the EIA study, WHA Eastern Seaboard Industrial Estate 4 (WHA ESIE 4) was identified to have high-risk for biodiversity loss due to its close proximity to Nong Pla Lai Reservoir. As a result, WHAUP takes precautionary actions and mitigation measures in order to ensure that regulations and WHA ESIE 4's EIA requirements in terms of biodiversity protection are met. WHAUP maintains its wastewater treatment process at its best efficiency, and regulatory monitors the wastewater at inlet and discharge to ensure compliance with regulatory thresholds. Additionally, water quality within natural resources at upstream and downstream of the discharging points from WHA ESIE 4 are regularly sampled in order to study the impacts on aquatic ecology. A baseline study of each biodiversity parameters (i.e. phytoplankton, zooplankton, aquatic animals, aquatic plants and benthos) were sampled to allow for comparison with the monitoring results. Based on 2020 monitoring results, the diversity index remains at a moderate level, indicating that WHA ESIE 4's operations have no drastic impacts toward biodiversity.

Water Management

Given that water is vital in all aspects of lives, from maintaining good health, social and economic development to our natural ecosystems, water conservation is critically important. Impacts by the expansion of industrial operations could ultimately cause natural environment to wholly degrade. Nevertheless, shifts in precipitation patterns due to climate change impacts have posed potential risks toward declining water levels and availability. As a result, utility service providers could be faced with challenges to ensure safe and sufficient water supply for all users. Water, therefore, must be managed at every part of the cycle from water abstraction, pre-treatment, distribution, usage, collection, reuse and ultimately replenish back to its natural sources.

With the global trend moving towards sustainable development, there are increasing societal, economic and environmental pressure for industries to promote water reuse and recycling with acceptable quality prior to discharging. Water resource is one of the core business services provided by WHAUP; therefore, it is important that the Company manages this valuable resource as efficiently as possible. WHAUP offers raw water, industrial water services and operates the central wastewater treatment facilities in all industrial estates of WHA Group. WHAUP's customers utilize the provided products, while water sources are also shared with the local communities.

WHAUP, as a leading utilities and service provider, recognizes that optimizing treated wastewater along with other concrete water stewardship measures is a responsible, yet efficient approach to sustain water resources for its value chain. To the best of its ability, WHAUP collectively implements numbers of projects and practices with the utmost goal to preserve water resources, and replenish water back to the wider environment.



Management Approach

WHAUP adopts the Environmental Quality, Energy Conservation and Biodiversity Policy, developed by WHA Group and endorsed by managements, to govern water management practices across its operational activities. Fundamentally, the Company strictly adheres to the effluent standards as prescribed under the Ministry of Natural Resources and Environment, Effluent Standard for Industrial Factories, Industrial Estates and Industrial Zones, Industrial Estate Authority of Thailand Act, B.E. 252 (1979) and the Factory Act, B.E. 2535 (1992). This is ensured through regular monitoring of parameters as prescribed under the Environmental Impact Assessment (EIA) requirements. Monitoring results are reported to the Industrial Estate Authority of Thailand (IEAT) and the Office of Natural Resources and Environmental Policy and Planning on a biannual basis. Water management at WHAUP is under the responsibility of an established Industrial Estate Operator (IEO) Department.

Wastewater Treatment

As an operator of the central wastewater treatment facilities for industrial operators within the industrial estates, WHAUP is highly attentive to water quality prior to discharging to public water ways. WHAUP requires its treatment facilities to perform at its maximum efficiency, therefore, conducts monthly sampling of wastewater generated from customers at the inlet of the treatment process to detect, and remediate potential impacts. The monitored parameters include heavy metals, conductivity, pH, total dissolved solid (TDS) and dissolved oxygen (DO) are inspected against the prescribed EIA regulated standards. In the event that the sampled wastewater generated from the customers exceed the permitted threshold, WHAUP will pursue with the following measures:

1. Issuance of an official warning letter to inform and authorize for the operators to re-treat its wastewater;
2. If the issue is not remediated, receiving valve at the central wastewater treatment facility will be closed;
3. Stop supplying industrial water; and
4. Contact Industrial Estate Authority of Thailand (IEAT) to take further actions (e.g. operation termination until remediation).

WHAUP offers and deploys variety of wastewater treatment technologies throughout WHA Group's industrial estates that are most suitable to treat wastewater generated from the customers' operational activities. Available treatment technologies include activated sludge system, aerated lagoon system and the hybrid rotation biological contactor system (Hybrid-RBC). The Hybrid-RBC system is a combination of the rotation biological contractor and activated sludge system, which is capable to treat wastewater with higher organic loading rates. Post-treatment wastewater are monitored to ensure that the quality complies with the standards prescribed by the Ministry of Natural Resources and Environment, Ministry of Industry, Industrial Estate Authority of Thailand and the respective EIA assessment prior to discharging to public water ways. The inspected parameters include heavy metals, pH, temperature, biological oxygen demand, chemical oxygen demand, grease and oil, suspended solid and total dissolved solid (TDS). In 2020, all monitoring parameters complied with the prescribed standards.

Industrial Water Supply

WHAUP offers industrial water to customers residing within WHA Group's industrial estates. The Company recognizes the imperative of water availability as it is a shared resource required for its operational business and amongst industrial operators, local communities

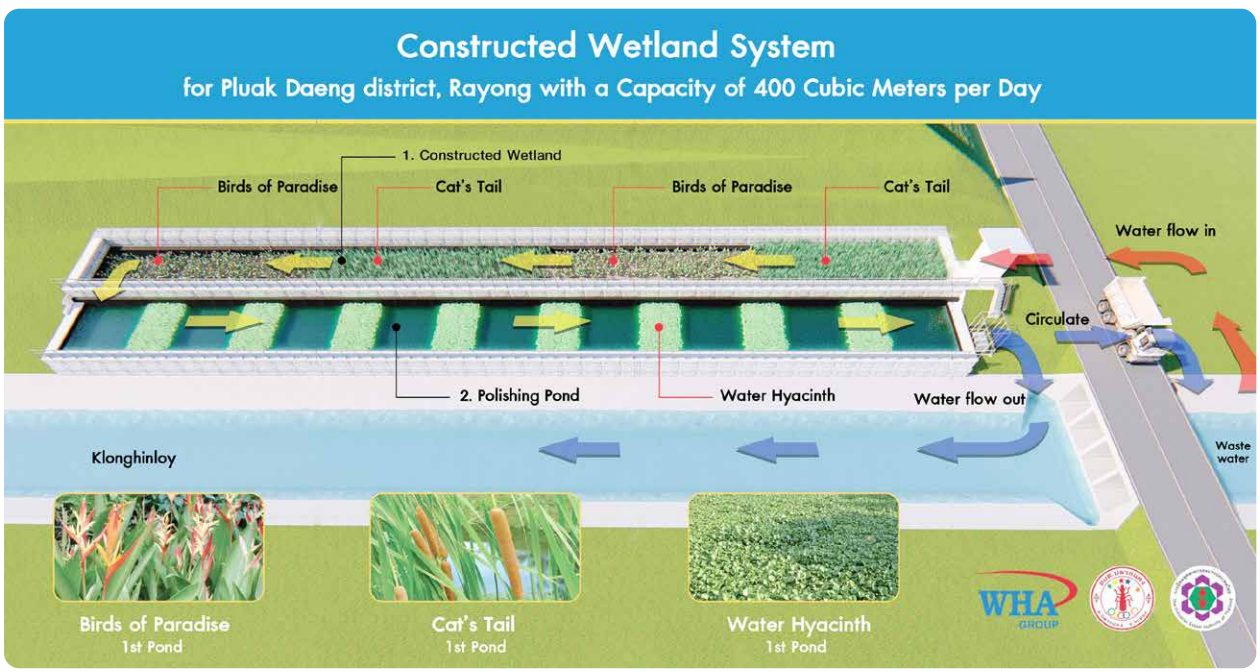
and the environment. Furthermore, the drought crisis faced in Thailand during 2020 has called for actions from stakeholders to cooperatively conserve water resource. Drought, as a result, were identified as one of WHAUP's corporate risk factors, as detailed in the Climate Change chapter. Additionally, the Industrial Estate Authority of Thailand (IEAT) and Federation of Thai Industries (FTI) have announced a 10% water reduction plan throughout January — June 2020 to ensure sufficient water supply in the country. To build customers' confidence and relieve water shortage, WHAUP supports WHA Group's sustainability strategy, by establishing a long-term reclamation target to double the capacity of reclaimed industrial water for industrial use from 30,200 m^3/ day in 2020 to 60,400 m^3/ day by 2025, to ultimately reduce water withdrawal from natural sources.

By that, WHAUP's wastewater reclamation project was initiated since 2017 to reduce water withdrawal from natural sources, and to minimize the discharged into public waterways. The reclamation facility optimizes the Ultrafiltration (UF) and Reverse Osmosis (RO) membrane technologies to enhance the treatment results. Both of these technologies have demonstrated tremendous improvements to the overall performance of the treatment process, in comparison to the conventional methods of coagulation and sand filtration commonly used in other industries. Moreover, reclaimed water can be converted into demineralized water or high-quality water for industrial operators in WHA Group's industrial estates. Noteworthy, the value of demineralized water is approximately 40-60% higher than normal industrial waters. In 2020, WHAUP invested 300 million Baht to increase the capacity of the reclamation system enabling the total reclamation profile of WHAUP to be equivalent to 30,200 m^3/day. As a result, WHAUP was able to reduce and minimize 5.62 Mm^3 of total water withdrawal and water discharge in 2020, which is approximately 32% higher than the reclamation performance in 2019. Because of this wastewater reclamation program, WHAUP could save cost on raw water sourcing by 81.1 million Baht annually.

In addition, WHAUP applies the 3R (Reduce, Re-use, and Recycle) to preserve water. By reducing water, WHAUP optimized the production and distribution efficiency since process design to reduce water loss. By re-use, all WHA Industrial Estates re-use treated wastewater for landscaping purposes as it contains high nutrients for plants, good for the ecosystem and saves cost from purchase of tap water. By recycle, WHAUP not only initiated the wastewater reclamation projects as detailed above, WHA Eastern Seaboard Industrial Estate (WHA ESIE) also recycles treated wastewater or grey water in flushing toilets.

Water Management for Community

WHAUP utilizes its expertise in water management to support and enhance the water qualities for neighboring communities' use within near proximity to WHA Group's industrial estates. The Company, together with WHA Group, launched the Clean Water for Planet project since 2016 with the main objectives to raise awareness, create better understanding and highlight the importance of water in hopes to instill a sense of responsibility within community members to protect precious natural resources. WHAUP initiates to construct and deliver wastewater treatment facilities for local communities to treat water quality in the canal, as one of its community development initiatives. The wastewater treatment facility is a wetland that optimizes biological plants and microorganisms to naturally treat the water quality. This is an eco-friendly, cost-effective and low maintenance wastewater treatment approach inspired by the late H.M. King Bhumibol Adulyadej The Great (King Rama IX). Presently, WHAUP has successfully delivered this facility to the Pluak Daeng Sub-district Administrative Organization in Rayong Province which treats surface water from upstream of Hin Loi Canal that passes through dense community areas. The constructed wetland has a capacity to treat 400 m^3 per day, allowing a reduction of organic compound by 80%.



With the successfully delivery of this facility to the Pluak Daeng Sub-district Administrative Organization in Rayong Province, WHA Group (inclusive of WHAUP) plans to take part in the development of a wetland project at Nong-kla municipality, Chantaburi province. The expected treatment capacity is 800 m^3 per day in which construction will begin in 2021.

In collaboration with the IEAT, the Water and Environmental Institute for Sustainability and WHA Group showcased the Clean Water for Planet initiative to Khlong Wang Tanode Basin Committee — a local water basin committee; inspiring other working groups to follow the footsteps that WHA Group and WHAUP have paved.

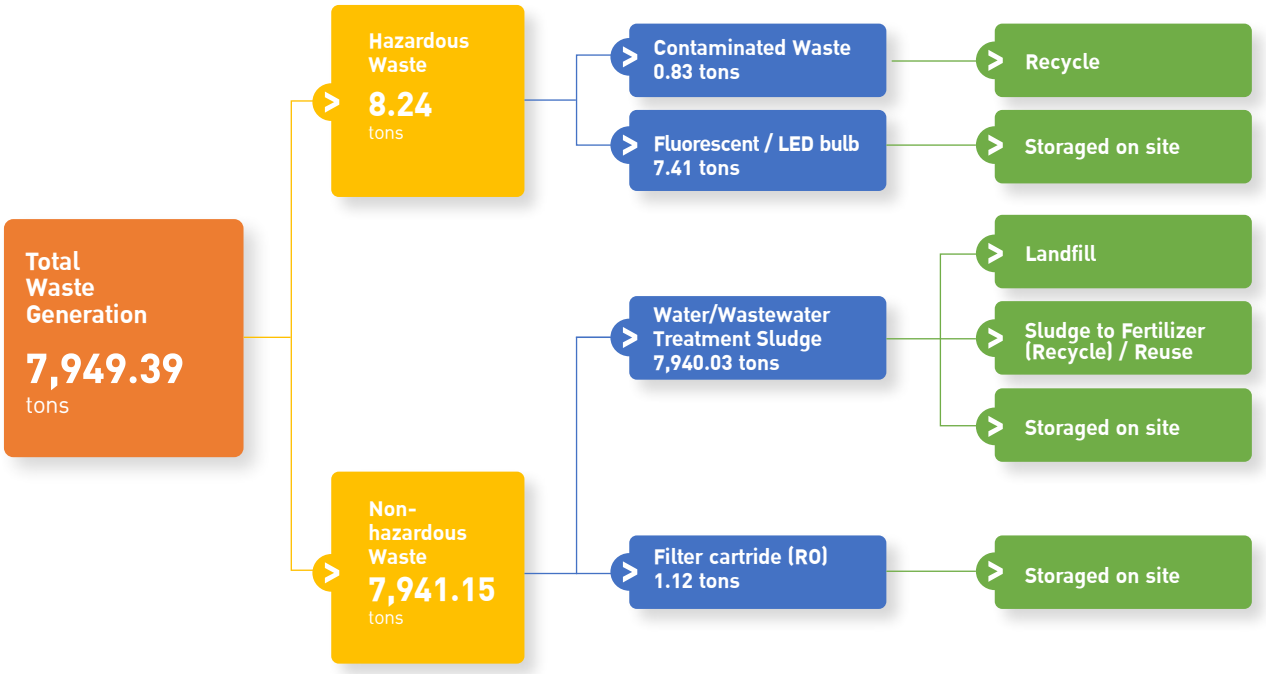
Waste Management

Waste production has always been an unavoidable process. However, in the recent years, rapid population growth, continuous urbanization and industrialization have only exacerbated the waste issues. Unsustainable treatment of municipal and/ or industrial solid waste only amplifies the burden on the environment as well as to the general public health. As a result, it topples the level of pressure and challenges created on industrial operators to efficiently and sustainably manage waste generation. Waste are generated from WHAUP's operational activities, thus, the Company is aware of the necessity of effective waste management measures to avoid potential negative impacts to the wider environment, and to protect the public health of its employees and the surrounding communities.

Management Approach

WHAUP adopts the Environmental Quality, Energy Conservation and Biodiversity Policy and related Procedures that are developed by WHA Group as frameworks to govern waste management directions at its operational sites. The Company fundamentally abides by relevant regulations and the requirements stated under the respective industrial estates' Environmental Impact Assessment (EIA) study. Nevertheless, waste management practices are overseen by a Waste Management Committee that is responsible for monitoring and categorizing generated waste, and to formulate effective waste management practices as appropriate.

As a utility service provider, non-hazardous waste associated with solid waste and sludge generated from the water and wastewater treatment processes account as the majority of WHAUP's absolute waste footprint. Additionally, hazardous waste associated with oil/chemical contaminated waste from the industrial water production and wastewater treatment processes are also generated. In 2020, the waste streams generated from the Company's operations is as stipulated in the following table.



Percentage of Waste to Landfill and Incineration (without energy recovery)

2018	2019	2020
58.60%	89.93%	55.66%

Target

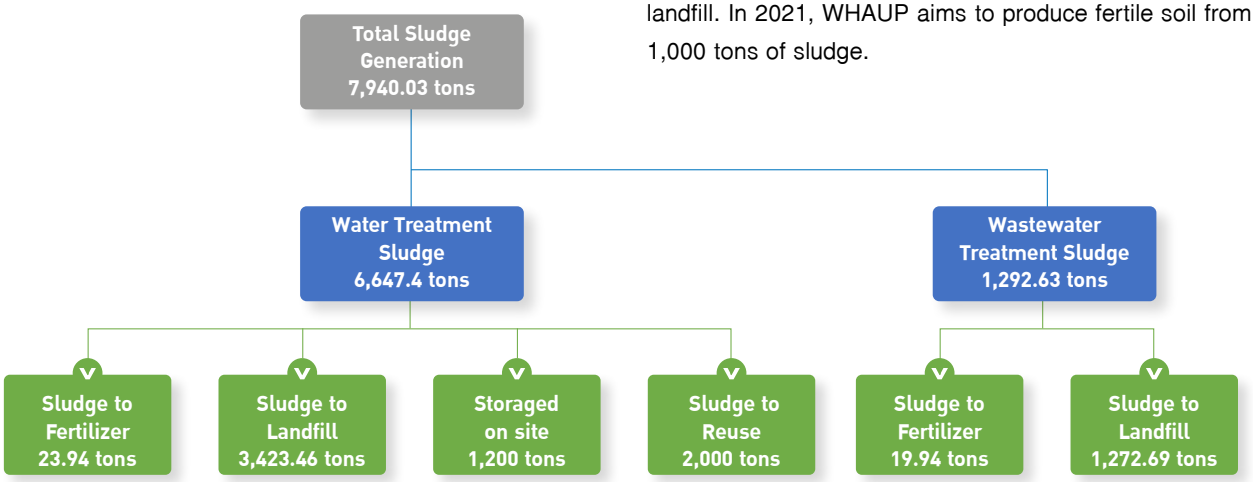
< 50% in 2021
and
< 20% in 2025

Waste Management Initiatives

WHAUP is committed to a target to reduce proportion of waste to landfill or incineration below 50% in 2021 and below 20% by 2025. Moving forward with this dedication, WHAUP has conducted multiple initiatives to enhance its waste management efforts in 2020. This includes conducting research and development on reuse and recycling practices along with investment in technological advancements to provide alternate solutions to landfilling and incineration without energy recovery.

Sludge to Fertilizer

To reduce waste disposal through landfill, WHAUP conducted research since 2019 to produce fertile soil from sludge that are generated from its water and wastewater treatment processes. The fertile soil production process is conducted through aerobic composting where the soil's qualities will be assessed to ensure no contaminants of heavy metals, high levels of organic compounds or pathogens are present that could ultimately damage plantations. Research were successful, and the project was launched in 2020 where 23.94 tons of sludge were composed to fertile soil instead of being disposed via landfill. In 2021, WHAUP aims to produce fertile soil from 1,000 tons of sludge.



Waste to Energy

Generating alternative fuel from waste is a responsible approach to tackle waste management issues, and also responds with the increase in energy demands. Since 2019, WHAUP and two other renowned shareholders, invested in a Waste-to-Energy Power Plant, referred to as the Chonburi Clean Energy (CCE) project. This project is in line with Thailand's Alternative Energy Development Plan 2015-2036 (AEDP 2015) which proposes a target of using 30% renewable or green energy of the total energy consumption by 2036. CCE is an eco-friendly, advanced waste-to-energy power plant that is located at WHA Chonburi Industrial Estate 1 (WHA CIE 1). CCE is the first industrial waste to energy facility in Southeast Asia to meet European emission standards. It was also awarded by the Ministry of Industry as the first industrial waste-to-energy power plant in the Eastern Economic Corridor. CCE has the capacity to generate electricity by converting non-hazardous waste to energy at 300 tons per day, or approximately 100,000 tons per year, enabling a maximum output of 8.63 MW of electricity energy. The production process of CCE includes conversion of received waste into superheated steam that will in turn propel a turbine to generate electricity. The plant has an efficient and reliable 8.63 MW of steam turbine.

In 2020, WHA Group has signed a contract agreement with its waste management service provider, Waste Management Siam, to send waste acquired from all industrial factories. Then, WMS will partly send the industrial waste to CCE for energy recovery. As a result, those waste will be diverted from landfill/incineration disposal methods.

Paperless Culture

COVID-19 pandemic outbreak has caused many industries to adopt digital technologies to reduce face-to-face interactions or human contacts to eliminate the risks of virus spread. As a result, communication, information and meetings were all shifted to online platform which reduced the overall use of paper printings. WHAUP takes part in WHA Group's journey to digital transformation through the ***"E-Paperless"*** project to drive a paperless culture within the Company. Employees were provided with tablet appliances to readily and conveniently access meeting slides, reports or relevant forms. Therefore, the initiative helped WHAUP avoid 69,861 document paper from being printed, and saved an equivalent of 244,801 Baht of printing expenses. Subsequently, by 2022, WHA Group aims to reduce up to 25% of paper usage.

Hazardous Chemical Containment Reduction

In 2020, WHAUP generated a total of 8.24 tons of hazardous waste in which 7.41 tons were kept on-site, while 0.83 tons were incinerated (with energy recovery) at a third party facility. Since 2019, WHAUP initiated a target to reduce 50% of hazardous waste generated by 2022. To support this ambition, WHAUP started to procure chemical substances via loading tankers instead of in bulks for use at its water and wastewater treatment facilities to reduce hazardous waste management efforts. By procuring via loading tankers, it helped to reduce WHAUP's disposal effort of empty chemical storage containers to landfill by 2 ton/year.

Sort N' Save Project

Initiated from the WHA Innovation Leader Program in 2019, WHAUP and WHA Group continued to support this project. The objective of the Sort N' Save Project is to increase environmental awareness amongst WHA Group employees as well as explore plausible innovative business platforms in alignment with the circular economy principles. Behavioral oriented campaigns were launched to increase the awareness and adjust employees' practices on recycling and waste minimization. Communication of these campaigns were made through accessible portals such as default desktop screens, Line-application, email signatures and WHA Group's monthly newsletter.

Reduce Dependency on Single-Use Plastics

While the use of various plastic products have eased our society with convenience and comfort, single-used plastics are however detrimental to our ecosystem. It poses irreversible, global impacts towards the climatic processes, biodiversity levels and the ecosystem in general. To combat this, WHAUP supported WHA Group in taking steps to reduce the consumption and disposal of single use plastics. In 2020, WHA Group stopped serving plastic bottled drinking water to its guests and visitors, enabling a reduction of more than 20,000 single-use plastic bottles. Collectively, through all of WHA Group's efforts mentioned, the Group was able to reduce up to 0.2 tons of total plastic waste generated as a result of less plastic consumption. Another measure that will be implemented to reduce single-use plastics includes the "Chemical dispersing system project", which is a system put in-placed to reduce plastic containers for reverse osmosis operation in WHA Eastern Industrial Estate (EIS). If this measure is fully implemented, it is expected to reduce 2.5 tons/year of plastic.

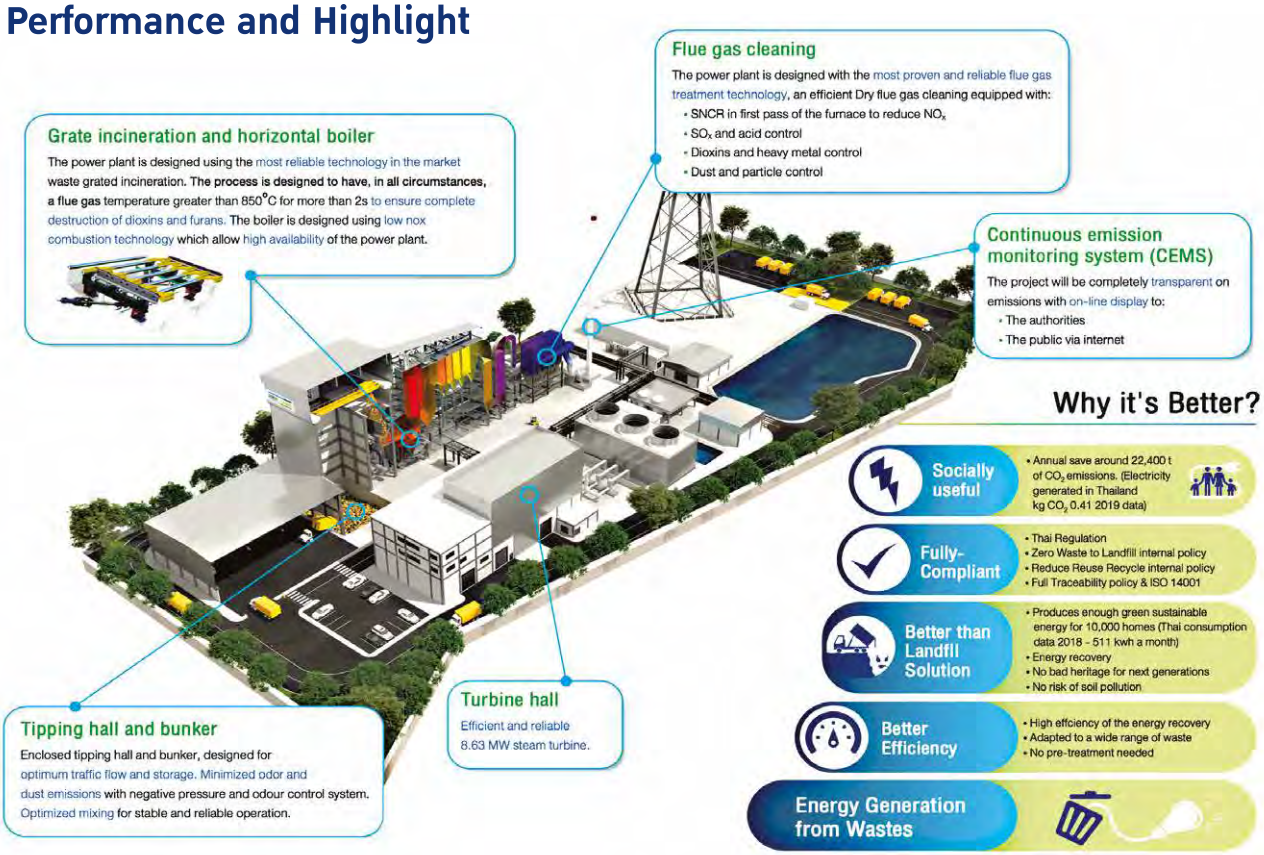
Air Emission

Air emissions are detrimental to human health and to the planet as a whole. Harmful air pollutants such as total suspended particulates, particulate matter, nitrogen dioxide (NO_2) and sulphur dioxide (SO_2) generated from production processes could pose wide range of health effects. Like people, animals and plants, entire ecosystems can suffer effects from air pollution. WHAUP is aware that the emissions generated from business facilities that it has operational control over could potentially pose impacts to the wider environment and to its stakeholders.

Management Approach

Impacts from air emission generation from facilities or businesses that WHAUP has operational control over across the Company's portfolio are thoroughly managed; extended to the operational businesses that WHAUP has investment in. Emissions from such facilities are managed and continuously monitored throughout project life cycle to ensure that its generated pollutants meet the Company's goal to abide by the regulatory threshold and does not pose negative impacts to the surrounding communities and the environment. For example, during land reclamation under project construction phrase, dust particulates are monitored to ensure that all impacts are restricted within the construction areas and does not affects the surrounding lands. In addition, advanced technologies are adopted and incorporated early in the project cycle at the facility design phase to ensure effective air emission management.

Performance and Highlight



The Chonburi Clean Energy (CCE), the waste-to-energy power plant that WHAUP has investment, is equipped with the most advanced technologies in terms of reliability, sustainability and environmental protection. It uses a safe and environmentally sustainable incineration technology and high standard air emission control systems. It uses a grate incineration and horizontal boiler where the process is designed to have a flue gas temperature greater than 850 ℃ for more than two seconds to ensure complete destruction of dioxins and furans. It is also equipped with dry flue gas cleaning technology to control the air pollutants level including NO_2, SO_2, hydrochloric acids, dioxins, heavy metal, dust and particulate matters. Furthermore, the boiler uses low NOx combustion technology to ensure low air pollutant emissions. The power plant records real-time monitoring results of air emission parameters via the installed continuous emission monitoring system (CEM).

Impressively, CCE has already met the European air emission standards that are known to be more stringent than that of local Thai threshold as portrayed in the following table. CCE commenced its operation in November 2019, and the monitoring results during 2020 periods portrayed that the monitored parameters including Total Suspended Particulates, NO_2, SO_2, Hydrogen Fluoride, Hydrogen Chloride, Dioxins/ Furans and dust particulates were in compliance with the EU standards.

Emission	Unit	2020 Monitoring Results	EU Regulation	Thai Regulation
			(Dry Gas 25˚C, 7% Oxygen)	
Nitrogen Dioxide (NO_2)	ppm	96.3	136.7	180
Sulfur Dioxide (SO_2)	ppm	0.3	24.6	30
Hydrogen Fluoride	ppm	1.0	1.6	-
Hydrogen chloride	ppm	3.9	8.6	25
Dioxins/Furan	Ng/Nm^3	0.07	0.13	0.1
Dust	Ng/Nm^3	2.0	12.9	70

Climate Change

Climate change is exacerbating at an increasing rate, globally. Many companies and industries have been challenged with the detrimental social, economic, and environmental impacts of climate change on the disruption of their operations and to their business continuity. Variables influencing the severity of climate change impacts are the greenhouse gases (GHG) emissions from the increase in size of population, consumption of fuel and electricity, as well as growth of manufacturing industries. In addition, the climate impacts are made especially alarming with the on-going COVID-19 pandemic. With the society moving towards the 'new normal' lifestyle, where the use of digital platforms and technology is dominant, there has been a large-scale increase in GHG emission as a result of electricity usage. With the lockdowns in-placed across the globe, times spent in-doors also increases; use of air conditionings, heaters and other household electrical uses intensify the risks and impacts of climate change at a global scale. Significantly in 2020, with the intensification of climate change, Thailand experienced a long-lasting drought due to a combination of precipitation deficit and delayed start to the monsoon season. WHAUP depends on natural resources for the operation of its water services and renewable energy offerings, thus, impacts from climate change could ultimately affect its business and customers. In order to tackle the challenge, WHAUP has taken numbers of mitigation measures and preventive actions on climate-related risks to its operations, customers, and other stakeholders involved.

Management Approach

Climate related impacts are taken into account since the very beginning of WHA Group's industrial estate and WHAUP's utilities service development. As part of the Environmental Impact Assessment (EIA) study, the geographical settings of the infrastructures associated with climate change impacts, such as droughts and floods, are assessed. Precautionary actions were effectively laid out and implemented throughout the project life cycle to safeguard WHAUP's operational businesses from potential climate change impacts, which include construction of water reservoirs, monitoring schemes and etc.

In addition, WHAUP conducts quarterly review of enterprise risk management, and risk associated with water shortage or floods are monitored on a monthly basis. The objectives of the risk assessment are to identify significant risks, evaluate the effectiveness of in-placed mitigation measures and determine additional measures to address the challenges imposed by climate change. In 2020, the risks and impacts imposed from climate change are drought, flood and irradiation fluctuations.

Risks	Impacts	Implemented or Planned Mitigation Measure
Flood	Operational disruption and supply to customers	• Construction of raw industrial water and wastewater treatment facilities on higher ground. The operating location is equipped with sufficient water runoff drainages, and relevant infrastructures have food dikes surrounding its perimeter. • Routine monitoring of water storage level at Eastern Seaboard and Northern reservoirs. • Routine inspection and maintenance for dykes and water pumps to ensure effective conditions. • Installation of ultrasonic equipment at WHA Saraburi Industrial Land (WHA SIL) to monitor water levels in the retention pond and raw water reservoir. • Installation of ultrasonic equipment and SCADA system to closely monitor water levels and manage raw water supply at both the raw water retention pond and reservoir at WHA Eastern Seaboard Industrial Estate (WHA ESIE) and WHA ESIE 1.
Drought	Decrease in availability of water resource to support WHAUP's raw industrial water service.	• Investment in water reclamation projects to reduce raw water withdrawal from natural sources. Reusing and recycling of water from the treatment process for cleaning and landscaping purposes. • Construction of additional ponds and water reservoir to ensure that capacity of water storage is sufficient for self-supply. - Increased storage capacity at WHA Saraburi Industrial Land by 383,000 m^3 or equivalent to 19.2 days of self-supply. - Construction of floating pump with capacity to divert 250,000 m^3 of water from dead storage. - Renovate underground deep well at WHA Rayong Industrial Land resulting in an increase of water for self-supply by 1,121 m^3/day or approximately 10% of the water demand. • Routine monitoring of water storage levels at Eastern Seaboard and Northern reservoirs.
Irradiation Fluctuations	Uncertain patterns of sunlight affects the consistency, performance and reliability of renewable energy generation from solar panels.	• Design the solar power system that supports both low light and overheat conditions and apply equipment such as Invertor and PV Panel to maximize electricity generation from solar panels.

The plan, as mentioned above, has allowed WHAUP to continue its business smoothly and without any negative impacts as a result of droughts, floods or irradiation fluctuations. To sustainability tackle drought and climate change issues, the Company has been reserving water into various water retention ponds while also finding more ways to increase water-use efficiency such as through investment in wastewater project (i.e. Wastewater Reclamation), as detailed in the Water Management chapter.

Greenhouse Gas Emission Reduction

As the effects of climate change can pose significant impacts to business operation and the wider-environment, WHAUP proactively reduces its carbon footprint which is considered as the leading cause of the rapid changing climate. Majority of WHAUP's carbon footprint comes from GHG Scope 2 indirect emissions from electricity usage. GHG Scope 1 direct emissions from the Company's own diesel generators and vehicles are also generated. WHAUP supports WHA Group's GHG Scope 2 reduction target at 3% within 2022 against 2019 baseline, which will reduce 588 tCO_2e of indirect emission. Hence, various energy conservation management approach and initiatives have been implemented as detailed in the Energy Management chapter.

Energy Management

With the rise in population and the increasing environmental concerns, natural resources have been depleting at an alarming rate. As a result, governments, non-governmental organizations and private companies have been promoting the production and consumption of renewable energies through various new policies, advanced technologies and innovative initiatives. WHAUP plays a critical role in providing such alternative renewable energy input through its service offering of solar energy generation. Utilizing renewable energy allows customers to efficiently use energy, reduce dependency on the grid and also mitigate impacts on the wider environment. Furthermore, WHAUP is also effectively and responsibly managing energy usage within its operations to reduce potential adverse impacts on the environment and all stakeholders involved.

Management Approach

WHAUP adopts WHA Group's developed Energy Conservation Policy that is enforced to all employees and applicable buildings as prescribed under the Building Control Act, B.E. 2540 (1997) and Promotion and Conservation of National Environmental Quality Act, No. 2, B.E. 2550 (2007). An Energy Committee, inclusive of representatives from WHAUP, was established to oversee energy management throughout WHA Group, including at the Company's operational activities. Furthermore, the WHAUP supports WHA Group's target to reduce the group-wide grid electricity consumption by 3% within 2022 against 2019 baseline.

Energy Conservation in Own Operation

Solar Rooftop

In 2020, WHAUP installed solar rooftop panels at its wastewater treatment facility at WHA Eastern Industrial Estate (WHA EIE). Such initiative reduced conventional electricity by 843,400 kWh per year, and offset 422 tCO_2e of GHG Scope 2 emission. Additionally, the solar carparks at plaza complex 1 and 2 (located in ESIE) and ESIE 4 also generated and reduced grid electricity usage with 242,179 kWh per year of solar energy, or prevented 122 tCO_2e of GHG indirect emissions.

In addition, the Company is also conducting feasibility studies to install solar rooftop panels coupled with battery energy storage system (BESS) at its water treatment facility at WHA Eastern Seaboard Industrial Estate (WHA ESIE). This will generate solar power at approximately 820 kW coupled with 550 MW of BESS capacity. This project will help WHAUP substitute 1,176 MWh of electricity off-take from the grid, which is equivalent to saving on electricity expenses of 4.12 million Baht per year. In parallel, such initiative will reduce 588 $kgCO_2e$ of GHG Scope 2 emission, also contributing to WHA Group's GHG reduction target. The project is expected to construct in early 2021 and commence during the later months of that same year.

Energy Saving in Office Buildings

WHAUP actively supports WHA Group's launched ***"Let's Save the World Together"*** program. Such program was initiated to encourage all employees to make slight modifications to current practices to save energy such as turning off electrical appliances, use stairs instead of elevators, etc. This propagates the positive behavior changes towards energy consumption.

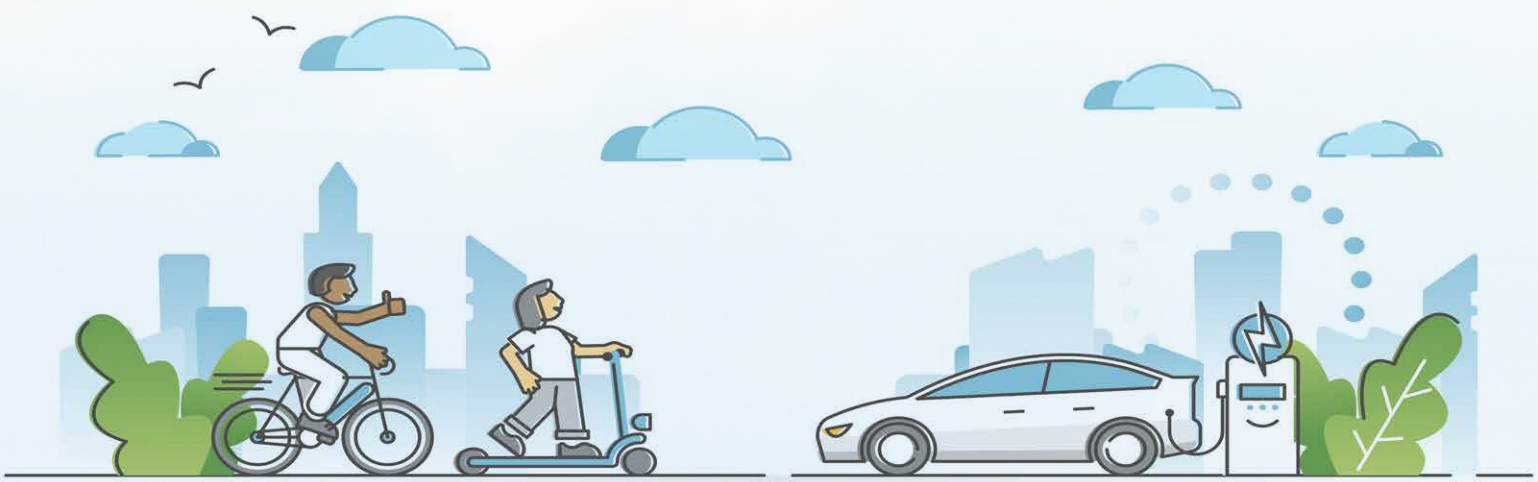
Integrated Energy Solutions for Customers

Solar Rooftop Service Package

In addition to energy conservation within its own operation, WHAUP is also advancing environmentally friendly energy platforms to industrial customers. The Company offers an all-in solar rooftop service package for customers in Thailand including design, permitting, installation, and long-term operation and maintenance at no upfront cost to customers. Customers are offered energy at lower prices while also being able to offset their GHG emissions. WHAUP commits to a long-term target to a signed power purchase agreement and provide altogether 300 MW of solar power to potential customers by 2023. By the end of 2020, the annual target was met as WHAUP installed solar rooftop panels for customers that generated altogether 51 MW of solar energy. Collectively, the installed solar projects helped customers to reduce GHG scope 2 emissions by 150 tCO_2e.

Energy Saving	Performance	Target		
	2020	2020	2021	2023
Installed Capacity (End of Year) (MW)	51	51	90	300
GHG Emission Offset from Grid Electricity Consumption (tCO_2e)	26	26	45	150

In October 2020, WHAUP delivered the solar carpark at SAIC Motor Company - CP Co., Ltd. (SAIC MOTOR-CP) covering 31,000 m^2 of solar rooftop space that will generate 4.88 MW of clean energy. The project was classified as the largest solar carpark projects to date in Thailand. The solar roof carpark ultimately supports the customer to save energy cost and fulfill their environmental commitments.



WHAUP
Performance Summary

Economic Performance

GRI Standard	Performance	Unit	2017	2018	2019	2020
201-1	Direct economic value generated					
	Revenue	Million Baht	3,569.86	3,755.70	3,738.37	2,564.23
	Economic value distributed					
	Annual dividend payment	Million Baht	-	778.01	1,162.80	965.81
	Operating cost		1,067.51	1,088.31	1,127.08	1,150.69
	Employee expenses		72.11	91.63	106.37	111.02
	Tax		69.38	65.01	62.63	54.04
	Social investment		0.06	1.07	0.30	16.31
	Economic value retained		2,360.80	1,731.67	1,279.19	266.36
205-2	Communication and training on anti-corruption policy to governance body members					
	Number of governance body members	%	-	75	100	100
	Communication and training on anti-corruption policy to employees					
	Number of employees	%	-	17	100	100
205-3	Confirmed incidents of corruption					
	Total number of confirmed incidents of corruption	Case	0	0	0	0
	Number of employees who dismissed due to corruption	Person	0	0	0	0
	Total number of confirmed incidents when contracts with business partners were terminated or not renewed due to violations related to corruption	Case	0	0	0	0
	Public legal cases regarding corruption	Case	0	0	0	0
418-1	Customer privacy					
	Total number of substantiated complaints received concerning breaches of customer privacy from outside parties and substantiated by the organization	Case	0	0	0	0
	Total number of substantiated complaints received concerning breaches of customer privacy from regulatory bodies		0	0	0	0
	Total number of identified leaks, thefts, or losses of customer data		0	0	0	0

Social Performance

Employment

GRI Standard	Performance	Unit	2017		2018		2019		2020	
			Male	Female	Male	Female	Male	Female	Male	Female
102-8	Total number of employees	Persons	82		101		110		127	
	Employee by gender									
	Total number of employees by gender	Persons	68	14	83	18	92	18	22	105
	Permanent employees									
	Number of permanent employees by gender	Persons	68	14	83	18	92	18	22	105
	Total number permanent employees		82		101		110		127	
	Temporary employees by business units									
	Number of temporary employees by gender	Persons	0	0	0	0	0	0	0	0
	Total number of temporary employees:		0		0		0		0	
	Employee with disabilities									
	Total employees with disabilities	Persons	0	0	0	0	0	0	0	0
401-1	**New Employee**									
	Total new employee	Persons	5	8	17	4	19	1	25	9
			13		21		20		34	
	New hire rate	%	6.10	9.76	16.83	3.96	17.27	0.91	19.69	7.09
			15.85		20.79		18.18		26.78	
	New employee by age									
	Below 30 years old	Persons	2	1	9	2	12	0	14	7
		%	2.44	1.22	8.91	1.98	10.9	0	10.85	5.43
	30-50 years old	Persons	3	7	7	2	7	1	11	2
		%	3.66	8.54	6.93	1.98	6.36	0.91	8.53	1.55
	Over 50 years old	Persons	0	0	1	0	0	0	0	0
		%	0	0	0.99	0	0	0	0	0
	Turnover rate									
	Total employee turnover	Persons	2	3	3	1	11	1	8	3
			5		4		12		11	
	Turnover rate	%	2.44	3.66	2.97	0.99	10	0.91	6.20	2.33
			6.1		3.96		10.91		8.53	
	Employee turnover by age									
	Below 30 years old	Persons	1	1	0	0	5	0	1	0
		%	1.22	1.22	0	0	4.55	0	0.78	0.00
	30-50 years old	Persons	1	2	3	1	6	1	5	3
		%	1.22	2.44	2.97	0.99	5.45	0.91	3.88	2.33
	Over 50 years old	Persons	0	0	0	0	0	0	2	0
		%	0	0	0	0	0	0	1.55	0.00

GRI Standard	Performance	Unit	2017		2018		2019		2020	
			Male	Female	Male	Female	Male	Female	Male	Female
404-1	**Employee training**									
	Total number of training hours provided to employees	Hours	1,419.50	253.50	1,474.10	121.90	1,346.50	408.00	2,187.00	276.00
			1,673.00		1,596.00		1,754.50		2,463.00	
	Average training hours		20.88	18.11	17.76	6.77	14.64	22.67	20.63	12.00
			20.40		15.80		15.95		32.63	
	Average training hours by levels									
	Executives	Hours	470		280		306		72	
	Middle management		140		58		62		501	
	Staff		1,063		1,258		1,386.50		1890	
404-3	**Percentage of employee received performance review by level**									
	Executives	%	100		100		100		100	
	Middle management		100		100		100		100	
	Staff		100		100		100		100	
405-1	**Diversity of Director to executives level by age**									
	Below 30 years old	Persons	19		28		34		40	
	30-50 years old		56		65		67		75	
	Over 50 years old		7		8		9		14	

COMMUNITY ENGAGEMENT

GRI Standard	Performance	Unit	2017	2018	2019	2020
413-1	**Operations with community engagement**					
	Total percentage of reporting operations involved with local community engagement	%	100	100	100	100

OCCUPATIONAL HEALTH AND SAFETY

GRI Standard	Performance	Unit	2017	2018	2019	2020
403-9	**Lost time injury frequency rate (LTIFR)**					
	Employee	Case per 1,000,000 hours worked	0	0	4.68	0
	Contractor		0	0	0	0.93
	Fatalities					
	Employee	Persons	0	0	0	0
	Contractor		0	0	0	0

Environment Performance

Materials

GRI Standard	Performance	Unit	2017	2018	2019	2020
301-1	**Total renewable materials used**					
	Water	m^3	33,542,602	15,989,684	21,180,880	46,879,806
301-2	**Recycled input materials used**					
	Percentage of recycled water used to manufacture the organization's primary products and services	%	2.78	4.99	3.89	10.56

Waste

GRI Standard	Performance	Unit	2017	2018	2019	2020
306-3	**Waste composition**					
	Total waste	Tons	3,549.51	4,061.23	4,905.25	7,949.39
	- Hazardous waste		6.18	7.17	6.93	8.24
	- Non-hazardous waste		3,543.33	4,054.06	4,898.32	7,941.15
306-4	**Hazardous waste diverted from disposal by recovery option**					
	Total	Tons	4.89	5.53	5.93	7.41
	- Preparation for reuse		-	-	-	-
	- Recycling		-	-	-	-
	- On-site storage		4.89	5.53	5.93	7.41
	Non-hazardous waste diverted from disposal by recovery option					
	Total	Tons	985.06	1,674.06	487.12	3,245.00
	- Preparation for reuse		0	0	0	2,000
	- Recycling		0	0	0	43.88
	- On-site storage		985.06	1,674.06	487.12	1,201.12
	Waste prevented					
	Waste prevented	Tons	989.95	1,679.59	493.05	3,252.41
306-5	**Hazardous waste directed to disposal by disposal operation**					
	Total	Tons	1.29	1.64	1.00	0.83
	- Incineration (with energy recovery)		-	-	-	-
	- Incineration (without energy recovery)		0	0	0	0.83
	- Landfilling		1.29	1.64	1.00	0
	- Other disposal operations		-	-	-	-
	Non-hazardous waste directed to disposal by disposal operation					
	Total	Tons	2,558.27	2,380.00	4,411.20	4,696.15
	- Incineration (with energy recovery)		-	-	-	-
	- Incineration (without energy recovery)		-	-	-	-
	- Landfilling		2,558.27	2,380.00	4,411.20	4,696.15
	- Other disposal operations		-	-	-	-

Energy

GRI Standard	Performance	Unit	2017	2018	2019	2020
302-1	Energy consumption from non-renewable sources					
	Diesel generator	Liters	31,638.76	44,164.35	32,967.27	92,897.03
	Grid electricity consumption	KWh	20,413,719.44	25,354,446.78	27,022,963.95	27,112,722.66
	Energy consumption from renewable source					
	Solar power	KWh	0	0	180,365.05	313,810.46

GHG Emission

GRI Standard	Performance	Unit	2017	2018	2019	2020
305-1	Scope 1 emissions					
	Total scope 1 emissions	ton CO_2e	85.68	119.60	89.27	559.58
305-2	Scope 2 emissions					
	Total scope 2 emissions	ton CO_2e	11,882.83	14,758.82	15,730.07	13,553.65

Note: Scope 1 emissions data are from diesel used in power generator and Company's vehicles.
Scope 2 emissions data are from electricity used in water production and wastewater treatment plants.

Water and Effluents

GRI Standard	Performance	Unit	2017	2018	2019	2020
303-3	**Water withdrawal by source**					
	Total water withdrawal	m^3	66,262,741	64,943,944	67,343,639	64,830,392
	- Surface water		7,397,593	7,369,516	3,811,909	15,555,500
	- Third party water		58,865,148	57,574,428	63,531,730	49,274,890
303-4	**Water discharge by destination**					
	Total water discharge	m^3	32,720,139	48,954,260	46,162,759	17,950,586
	- Surface water		30,872,899	47,185,818	44,292,549	16,117,382
	- Seawater		1,847,240	1,768,442	1,870,210	1,833,204
	Water discharge by category					
	Freshwater (⩽ 1,000 mg/L Total Dissolved Solids)	m^3	30,872,899	47,185,818	44,292,549	16,117,382
	Other water (⩽ 1,000 mg/L Total Dissolved Solids)		1,847,240	1,768,442	1,870,210	1,833,204

Effluents Quality

GRI Standard	Performance	Unit	Standard	2017	2018	2019	2020
306-1	**Water discharge by quality and location***						
	WHA CIE1						
	Biochemical Oxygen Demand (BOD)	mg/L	⩽ 20	12.00	13.00	11.00	8.75
	Chemical Oxygen Demand (COD)	mg/L	⩽ 120	42.00	44.00	44.00	37
	Suspended Solid (SS)	mg/L	⩽ 50	17.00	16.00	12.00	9
	WHA CIE 2						
	Biochemical Oxygen Demand (BOD)	mg/L	⩽ 20	6.00	3.00	5.00	3.3
	Chemical Oxygen Demand (COD)	mg/L	⩽ 120	26.00	27.00	51.00	26
	Suspended Solid (SS)	mg/L	⩽ 50	13.00	11.0	12.00	14.3
	ESIE Phase 1						
	Biochemical Oxygen Demand (BOD)	mg/L	⩽ 20	5	6	3	4
	Chemical Oxygen Demand (COD)	mg/L	⩽ 120	38	49	44	31
	Suspended Solid (SS)	mg/L	⩽ 50	20	12	10	<5
	ESIE Phase 2B						
	Biochemical Oxygen Demand (BOD)	mg/L	⩽ 20	7	7	5	4
	Chemical Oxygen Demand (COD)	mg/L	⩽ 120	32	35	45	24
	Suspended Solid (SS)	mg/L	⩽ 50	16	12	9	11
	WHA ESIE 1 Phase 1						
	Biochemical Oxygen Demand (BOD)	mg/L	⩽ 20	10	11	10.16	6.80
	Chemical Oxygen Demand (COD)	mg/L	⩽ 120	30.33	40.75	50.26	30.00
	Suspended Solid (SS)	mg/L	⩽ 50	16.58	10.9	17.16	12.16
	WHA ESIE 1 Phase 3						
	Biochemical Oxygen Demand (BOD)	mg/L	⩽ 20	7.4	8.4	8.1	5.80
	Chemical Oxygen Demand (COD)	mg/L	⩽ 120	36.08	39.25	49.17	33.00
	Suspended Solid (SS)	mg/L	⩽ 50	14.27	10.83	8.70	7.6
	WHA ESIE 2						
	Biochemical Oxygen Demand (BOD)	mg/L	⩽ 20	11	8	5	5.59
	Chemical Oxygen Demand (COD)	mg/L	⩽ 120	64	31	52	35.5
	Suspended Solid (SS)	mg/L	⩽ 50	56	15	17	15.32
	WHA ESIE 4						
	Biochemical Oxygen Demand (BOD)	mg/L	⩽ 20	NA	NA	4 - 13	5
	Chemical Oxygen Demand (COD)	mg/L	⩽ 120	NA	NA	19 - 64	37
	Suspended Solid (SS)	mg/L	⩽ 50	NA	NA	6 - 50	21
	WHA EIE						
	Biochemical Oxygen Demand (BOD)	mg/L	⩽ 20	3	6	2	4
	Chemical Oxygen Demand (COD)	mg/L	⩽ 120	33	45	49	20
	Suspended Solid (SS)	mg/L	⩽ 50	17	26	22	17

GRI Standard	Performance	Unit	Standard	2017	2018	2019	2020
	WHA RIL						
	Biochemical Oxygen Demand (BOD)	mg/L	⩽ 20	9	12	8	8
	Chemical Oxygen Demand (COD)	mg/L	⩽ 120	33	36	49	37
	Suspended Solid (SS)	mg/L	⩽ 50	9	11	10	11
	WHA SIL						
	Biochemical Oxygen Demand (BOD)	mg/L	⩽ 20	6	4	3	3
	Chemical Oxygen Demand (COD)	mg/L	⩽ 120	54	45	41	40
	Suspended Solid (SS)	mg/L	⩽ 50	19	13	11	12

Note: WHAUP is responsible for water discharge quality of all WHA Industrial Estates, therefore, the data are reported by industrial estate locations.
Note: NA = Not applicable; Na = Not analyzed; ND = Not detected

Biodiversity

GRI Standard	Performance	Unit	2017	2018	2019	2020
304-1	Number of industrial estate located near protected areas	Operation	2	2	2	2
	Number of industrial estate located near high biodiversity value area		2	2	2	2
	Number of industrial estate that conducts biodiversity value assessment		2	2	3	3
	Number of industrial estate required biodiversity management plan		2	2	3	3
	Number of industrial estate implemented biodiversity management plan		2	2	3	3

Note: WHAUP is operated within WHA Industrial Estates, therefore, the data are reported by the number of industrial estates.

Environmental Compliance

GRI Standard	Performance	Unit	2017	2018	2019	2020
307-1	**Non-compliance with environmental laws and regulations**					
	Total number of violations of legal obligations/regulations	Cases	0	0	0	0
	- Significant fines	Baht	0	0	0	0
	- Non-monetary sanctions	Cases	0	0	0	0
	- Case brought through dispute resolution mechanisms	Cases	0	0	0	0

GRI
Content Index

General Disclosures

Global Reporting Initiative		Chapter	Page/Note
General Disclosure			
GRI 102: General Disclosures 2016	102-1 Name of the organization	About this Report	06
		Getting to Know WHAUP	08
	102-2 Activities, brands, products, and services	Getting to Know WHAUP	08-12
	102-3 Location of headquarters	About this Report	06
		WHAUP Strategic Locations	13-14
	102-4 Location of operations	WHAUP Strategic Locations	13-14
	102-5 Ownership and legal form	Shareholding Structure	15
	102-6 Markets served	Getting to Know WHAUP	08-12
		WHAUP Strategic Locations	13-14
	102-7 Scale of the organization	Getting to Know WHAUP	08-12
		WHAUP Strategic Locations	13-14
		Talent Attraction and Retention	59
	102-8 Information on employees and other workers	Talent Attraction and Retention	59
		Performance Summary	100
	102-9 Supply chain	WHAUP Value Chain	17
		Supply Chain Management	39-41
	102-10 Significant changes to the organization and its supply chain	WHAUP Strategic Locations	13-14
	102-11 Precautionary Principle or approach	Risk and Crisis Management	33-34
	102-12 External initiatives	Awards and Memberships	04-05
	102-13 Membership of associations	Awards and Memberships	05
	102-14 Statement from senior decision-maker	CEO Message	02-03
	102-15 Key impacts, risks, and opportunities	Risk and Crisis Management	33-36
	102-16 Values, principles, standards, and norms of behavior	Getting to Know WHAUP	07
		Codes of Business Conduct	31
		Human Resource Management	53
	102-17 Mechanisms for advice and concerns about ethics	Codes of Business Conduct	30-31

Global Reporting Initiative		Chapter	Page/Note
	102-18 Governance structure	Organization Chart	16
	102-32 Highest governance body's role in sustainability reporting	Sustainability Development at WHAUP	18
	102-40 List of stakeholder groups	Stakeholder Engagement	22
	102-41 Collective bargaining agreements	Labor Practice Indicators	56
	102-42 Identifying and selecting stakeholders	Stakeholder Engagement	22
	102-43 Approach to stakeholder engagement	Stakeholder Engagement	22-27
	102-44 Key topics and concerns raised	Stakeholder Engagement	22-27
	102-45 Entities included in the consolidated financial statements	WHAUP Strategic Locations	13-14
		Shareholding Structure	15
	102-46 Defining report content and topic Boundaries	About this Report	06
	102-47 List of material topics	Sustainability Development at WHAUP	18
	102-48 Restatements of information	(No restatements in 2020)	-
	102-49 Changes in reporting	About this Report	06
	102-50 Reporting period	About this Report	06
	102-51 Date of most recent report	About this Report	06
	102-52 Reporting cycle	About this Report	06
	102-53 Contact point for questions regarding the report	About this Report	06
	102-54 Claims of reporting in accordance with the GRI Standards	About this Report	06
	102-55 GRI content index	GRI Content Index	106-112
	102-56 External assurance	About this Report	06
Stakeholder Engagement			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Stakeholder Engagement	22
	103-2 The management approach and its components	Stakeholder Engagement	22-27
	103-3 Evaluation of the management approach	Stakeholder Engagement	22-27
Codes of Business Conduct			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Codes of Business Conduct	29
	103-2 The management approach and its components	Codes of Business Conduct	29-32
	103-3 Evaluation of the management approach	Codes of Business Conduct	29-32
GRI 205: Anti-corruption 2016	205-2 Communication and training about anti-corruption policies and procedures	Codes of Business Conduct	31-32
		Performance Summary	99
	205-3 Confirmed incidents of corruption and actions taken	Codes of Business Conduct	30
		Performance Summary	99

Global Reporting Initiative		Chapter	Page/Note
Risk and Crisis Management			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Risk and Crisis Management	33-34
	103-2 The management approach and its components	Risk and Crisis Management	33-36
	103-3 Evaluation of the management approach	Risk and Crisis Management	33-36
Responsible Investment			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Responsible Investment	37-38
	103-2 The management approach and its components	Responsible Investment	37-38
	103-3 Evaluation of the management approach	Responsible Investment	37-38
Supply Chain Management			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Supply Chain Management	39
	103-2 The management approach and its components	Supply Chain Management	39-41
	103-3 Evaluation of the management approach	Supply Chain Management	39-41
GRI 308: Supplier Environmental Assessment 2016	308-1 New suppliers that were screened using environmental criteria	Supply Chain Management	39
	308-2 Negative environmental impacts in the supply chain and actions taken	Supply Chain Management	39-41
GRI 414: Supplier Social Assessment 2016	414-1 New suppliers that were screened using social criteria	Supply Chain Management	39
	414-2 Negative social impacts in the supply chain and actions taken	Supply Chain Management	39-41
Customer Relationship Management			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Customer Relationship Management	42-43
	103-2 The management approach and its components	Customer Relationship Management	42-45
	103-3 Evaluation of the management approach	Customer Relationship Management	42-43, 45
Innovation Management			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Innovation Management	46
	103-2 The management approach and its components	Innovation Management	46-48
	103-3 Evaluation of the management approach	Innovation Management	46-48
GRI 203: Indirect Economic Impacts 2016	203-1 Infrastructure investments and services supported	Innovation Management	46-48
		Community Development	77

Global Reporting Initiative		Chapter	Page/Note
Data Security			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Data Security	49
	103-2 The management approach and its components	Data Security	49-51
	103-3 Evaluation of the management approach	Data Security	51
GRI 418: Customer Privacy 2016	418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data	Data Security	51
Human Rights			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Human Rights	54
	103-2 The management approach and its components	Human Rights	54-55
	103-3 Evaluation of the management approach	Human Rights	54-55
GRI 412: Human Rights Assessment 2016	412-2 Employee training on human rights policies or procedures	Human Rights	55
		Performance Summary	101
Labor Practice Indicators			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Labor Practice Indicators	56
	103-2 The management approach and its components	Labor Practice Indicators	56
	103-3 Evaluation of the management approach	Labor Practice Indicators	56
GRI 405: Diversity and Equal Opportunity 2016	405-1 Diversity of governance bodies and employees	Labor Practice Indicators	56, 59
		Performance Summary	101
Talent Attraction and Retention			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Talent Attraction and Retention	57
	103-2 The management approach and its components	Talent Attraction and Retention	57-59
	103-3 Evaluation of the management approach	Talent Attraction and Retention	58
GRI 401: Employment 2016	401-1 New employee hires and employee turnover	Talent Attraction and Retention	57, 59
		Performance Summary	100
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	Talent Attraction and Retention	59
GRI 404: Training and Education 2016	404-3 Percentage of employees receiving regular performance and career development reviews	Talent Attraction and Retention	59
		Performance Summary	101

Global Reporting Initiative		Chapter	Page/Note
Human Capital Development			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Human Capital Development	60
	103-2 The management approach and its components	Human Capital Development	60-62
	103-3 Evaluation of the management approach	Human Capital Development	60-62
GRI 404: Training and Education 2016	404-1 Average hours of training per year per employee	Human Capital Development	60
		Performance Summary	101
	404-2 Programs for upgrading employee skills and transition assistance programs	Human Capital Development	61-62
Occupational Health and Safety			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Occupational Health and Safety	63
	103-2 The management approach and its components	Occupational Health and Safety	63-67
	103-3 Evaluation of the management approach	Occupational Health and Safety	64
GRI 403: Occupational Health and Safety	403-1 Occupational health and safety management system	Occupational Health and Safety	63-67
	403-2 Hazard identification, risk assessment, and incident investigation	Occupational Health and Safety	64
	403-3 Occupational health services	Occupational Health and Safety	63-67
	403-4 Work participation, consultation, and communication on occupational health and safety	Occupational Health and Safety	63-67
	403-5 Worker training on occupational health and safety impacts directly linked by business relationships	Occupational Health and Safety	62, 63-67
	403-6 Promotion of worker health	Occupational Health and Safety	59, 67
	403-7 Prevention and mitigation of occupational health and safety management system	Occupational Health and Safety	63-67
	403-9 Work-related injuries	Occupational Health and Safety	64
		Performance Summary	101
Community Development			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Community Development	68
	103-2 The management approach and its components	Community Development	68-69
	103-3 Evaluation of the management approach	Community Development	69-79

Global Reporting Initiative		Chapter	Page/Note
GRI 201: Economic Performance 2016	201-1 Direct economic value generated and distributed	Community Development	69-79
		Performance Summary	99
GRI 413: Local Communities 2016	413-1 Operations with local community engagement, impact assessment, and development programs	Community Development	68-79
		Performance Summary	101
Introduction to Environmental Impact Management			
GRI 307: Environmental Compliance 2016	307-1 Non-compliance with environmental laws and regulations	Introduction to Environmental Impact Management	81-82
		Performance Summary	111
Biodiversity			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Biodiversity	83
	103-2 The management approach and its components	Biodiversity	83
	103-3 Evaluation of the management approach	Biodiversity	83
GRI 304: Biodiversity 2016	304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	Biodiversity	83
		Performance Summary	105
Water Management			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Water Management	84
	103-2 The management approach and its components	Water Management	85-87
	103-3 Evaluation of the management approach	Water Management	86
GRI 301: Materials 2016	301-2 Recycled input materials used	Water Management	86
		Performance Summary	102
GRI 303: Water and Effluents 2018	303-1 Interactions with water as a shared resource	Water Management	77, 82, 87
	303-2 Management of water discharge-related impacts	Water Management	85-86
	303-3 Water withdrawal	Water Management	85-86
		Performance Summary	103
	303-4 Water discharge	Water Management	85-86
		Performance Summary	103-105
Waste Management			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Waste Management	88
	103-2 The management approach and its components	Waste Management	88-89
	103-3 Evaluation of the management approach	Waste Management	89-91

Global Reporting Initiative		Chapter	Page/Note
GRI 306: Waste 2020	306-1 Waste generation and significant waste-related impacts	Waste Management	88-89
	306-2 Management of significant waste-related impacts	Waste Management	88-91
	306-3 Waste generated	Waste Management	89
		Performance Summary	111-112
	306-4 Waste diverted from disposal	Waste Management	89-91
		Performance Summary	111-112
	306-5 Waste directed to disposal	Waste Management	89-91
		Performance Summary	111-112
Air Emission			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Air Emission	92
	103-2 The management approach and its components	Air Emission	92-93
	103-3 Evaluation of the management approach	Air Emission	92-93
GRI 305: Emissions 2016	305-7 Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	Air Emission	92-93
Climate Change			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Climate Change	94
	103-2 The management approach and its components	Climate Change	94-95
	103-3 Evaluation of the management approach	Climate Change	95
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	Climate Change	95
		Performance Summary	103
	305-2 Energy indirect (Scope 2) GHG emissions	Climate Change	95
		Performance Summary	103
Energy Management			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Energy Management	96
	103-2 The management approach and its components	Energy Management	96-98
	103-3 Evaluation of the management approach	Energy Management	96-98
GRI 302: Energy 2016	302-1 Energy consumption within the organization	Energy Management	97
		Performance Summary	103
	302-4 Reduction of energy consumption	Energy Management	96-98

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