



## CLEAN SOLAR ENERGY

Installing solar panels to generate renewable energy for use in office buildings, as well as saving electricity costs and reducing carbon dioxide emissions that be pollution to the world.

**In 2022,**

Amount of recycled waste in East Water Building was 19.01% of total waste of



**6,833.50** kg.

Electricity consumption per unit of pumped water decreased from 2021 by

**8.82%**

Amount of carbon dioxide emissions decreased from 2021 by

**8.58%**

(from the total energy consumption of pumped water per unit of pumped water)





Increase green zone  
5 Rai/year,  
**400** trees/Rai.

1 tree absorbs  
an average of  
**9-15** kg/year  
of carbon dioxide.

Absorbs  
**238-396**  
tons of  
carbon dioxide/year



**PLANTING UPSTREAM FOREST,**  
taking care of natural reservoir by planting upstream forest  
that will help to store rainwater for use all year round  
and absorb carbon dioxide that causes global warming.

## VISION

“TO BE THE LEADER IN ENSURING SECURITY OF THE COUNTRY’S  
COMPREHENSIVE WATER RESOURCE MANAGEMENT  
AND DEVELOPMENT THROUGH SMART TECHNOLOGY”

### Missions

- 01 To develop the security and maintain stability of water supply in response to the long-term water demand.
- 02 To expand investment in water business comprehensively for continuous and sustainable growth both domestically and internationally.
- 03 To increase competitive advantages through technologies and innovations
- 04 To develop human resources and improve management efficiency.
- 05 To be socially and environmentally responsible and establish good relationships with all stakeholders in accordance with corporate governance principles.





ENTERING THE  
DECADE OF  
PROVIDING  
SUSTAINABLE  
TOTAL WATER  
SOLUTIONS

4<sup>th</sup>

## CORE VALUES

S

Stakeholder Focus

H

Holistic Thinking

A

Adaptability

R

Result Acceleration

P

Proactive and  
Creative Thinking

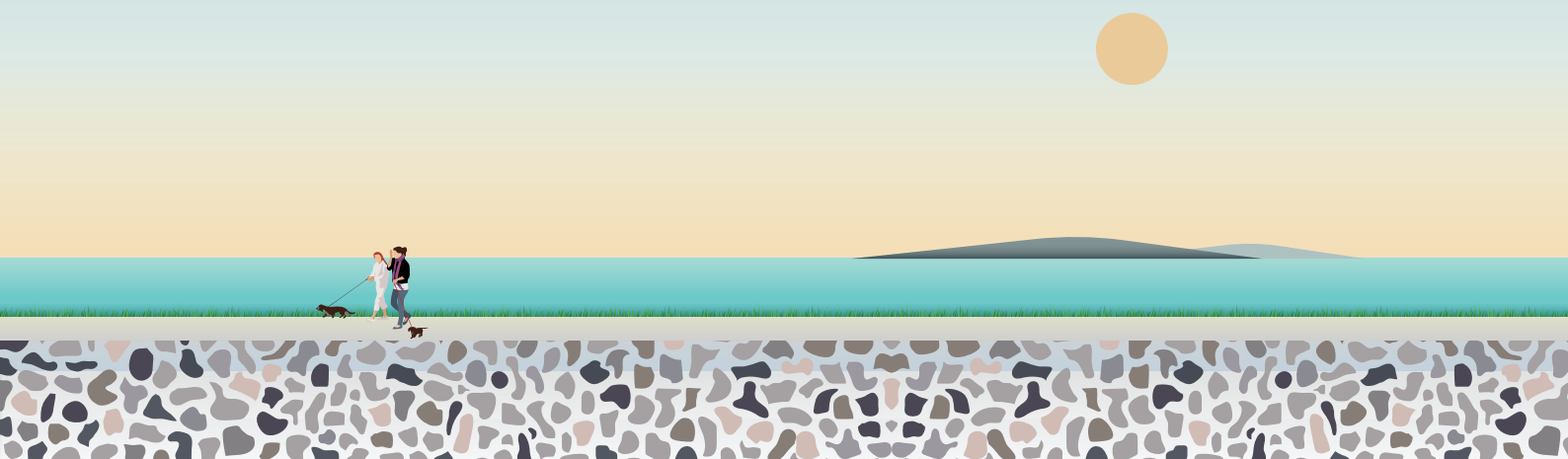


# QUALITY WATER MANAGEMENT FOR A BETTER TOMORROW



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## MESSAGE FROM THE PRESIDENT AND CHIEF EXECUTIVE OFFICER

(Disclosure 2-22)



// With the confidence in the Company's capability in professional water management, We are ready to step into the 4<sup>th</sup> decade because we are a part of the country's economic development //



For 30 years since its inception in 1992, the Company has been engaged in the raw water management business through large water grid for the consumer and industrial sectors according to the cabinet resolution to be the center for raw water management and support the eastern seaboard development plan to become the country's main industrial zone. The Company has accumulated experience and expertise in water management which made it possible for the Company to expand its raw water business to total water solution through innovation and modern technology under the design suitable for water users in all sectors, whether raw water business, tap water business, industrial water business, wastewater treatment business and recycled water business to create sustainable economic and social value forever.

In 2022, the Company faced challenges in various aspects including: **The Continuation of COVID-19 pandemic from the previous year:** Although the pandemic situation has been relieved, the Company still placed importance on employees by adopting technology to support hybrid working mode to create work-life balance. The Company also focused on developing capacity and expertise in the field as well as raising awareness and encouraging employees' engagement in creating good and efficient work that was effective to the organization society and environment. Moreover, the Company placed importance on other stakeholders by planning the work to respond to their needs and providing various engagement channels for faster and more effective communication.

**Climate Change:** In a situation of rising global temperatures, disasters have been intensifying every year such as rising sea levels, droughts, flash floods caused by changing rainfall, as well as changes in volume and quality in natural water sources that were affected by climate in many areas.

Therefore, ensuring water security in the eastern region to be sufficient to meet the growing water demand in the future is essential. The Company has therefore invested in the development of additional 139.08 kilometers of water grid system namely Khlong Luang – Chon Buri Water Pipeline, Nong Plalai – Nong Kho – Laem Chabang Water Pipeline, and Map Ta Phut –

Sattahip Water Pipeline to build confidence for water users both for consumer and industrial sectors. The Company continues to develop its capacity to provide efficient water distribution services in the Eastern Economic Corridor and continues to adhere to the mission to integrate raw water pipeline management in the eastern region focusing on unity and stability. This includes maintaining water pipeline system to adequately meet the water demand and can expand the water grid system to achieve maximum benefits in the future. This is what the Company has been committed to for the past 30 years, reinforcing its vision of “To be the leader in ensuring security of the country's comprehensive water resource management and development through smart technology” along with conducting business with responsibility to the community, society, and environment which is the foundation of transparent management with good governance.

With the dedication of the Board of Directors, executives, and employees on the foundation of sustainability, the Company gained a wide acceptance and trust as a provider of total water solution services. In 2022, the Company was recognized as a company in the Thailand Sustainability Investment (THIS) stock list for the 8<sup>th</sup> consecutive year. The Company also earned an excellent rating according to the Corporate Governance Report of Thai Listed Companies (CGR) assessment and the Sustainability Disclosure Award. Going forward, the Company is ready to bring its capacity and expertise in comprehensive water management to drive the country towards sustainability by creating permanent water security without compromising the quality of life of people in the community and society.

**“With the confidence in the Company's capability in professional water management over the past 30 years, leading to the stability of water resources and raw water grid system in the eastern region, we are ready to step into the 4<sup>th</sup> decade because we are a part of the country's economic development.”**



(Mr. Cherdchai Pitiwacharakul)

President & CEO

## ABOUT EAST WATER

**East Water – Expert in Total Water Solution Services through Water Grid System** (Disclosure 2-1)

Eastern Water Resources Development and Management Public Company Limited (East Water)

Ticker Symbol: EASTW, Registered Capital: 1,663.73 million Baht

### Head Office

**Eastern Water Resources Development and Management PCL.**

East Water Building, 1 Soi Vibhavadi Rangsit 5,  
Vibhavadi Rangsit Rd., Chom Phon Subdistrict,  
Chatuchak District, Bangkok 10900 (Thailand)

**Universal Utilities PCL. (UU PCL.)**

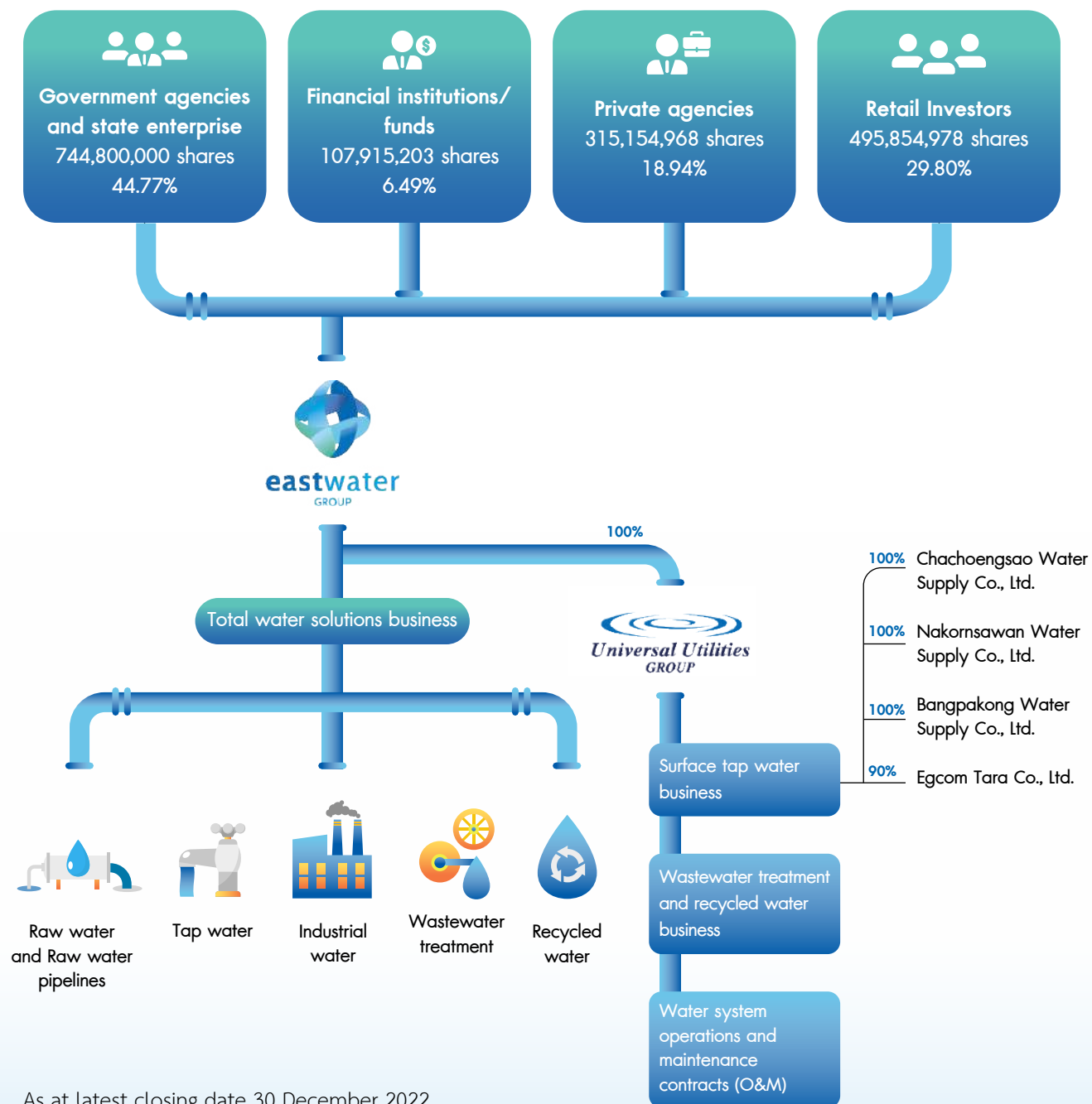
East Water Building, 1 Soi Vibhavadi Rangsit 5,  
Vibhavadi Rangsit Rd., Chom Phon Subdistrict,  
Chatuchak District, Bangkok 10900 (Thailand)

## EAST WATER GROUP'S BUSINESS STRUCTURE

(Disclosure 201-4)

The Company is mainly engaged in the provision of total water solution services including raw water, tap water, industrial water, wastewater treatment, and recycled water, while UU PCL., the Company's subsidiary, principally operates the tap water supply business and provides total wastewater management systems with the goal to enable people to have access to tap water thoroughly to enhance quality of life and well-being of the people. (Details are available in Annual Report 2022 (Form 56-1 One Report 2022) Product and Service information topic in page 36)



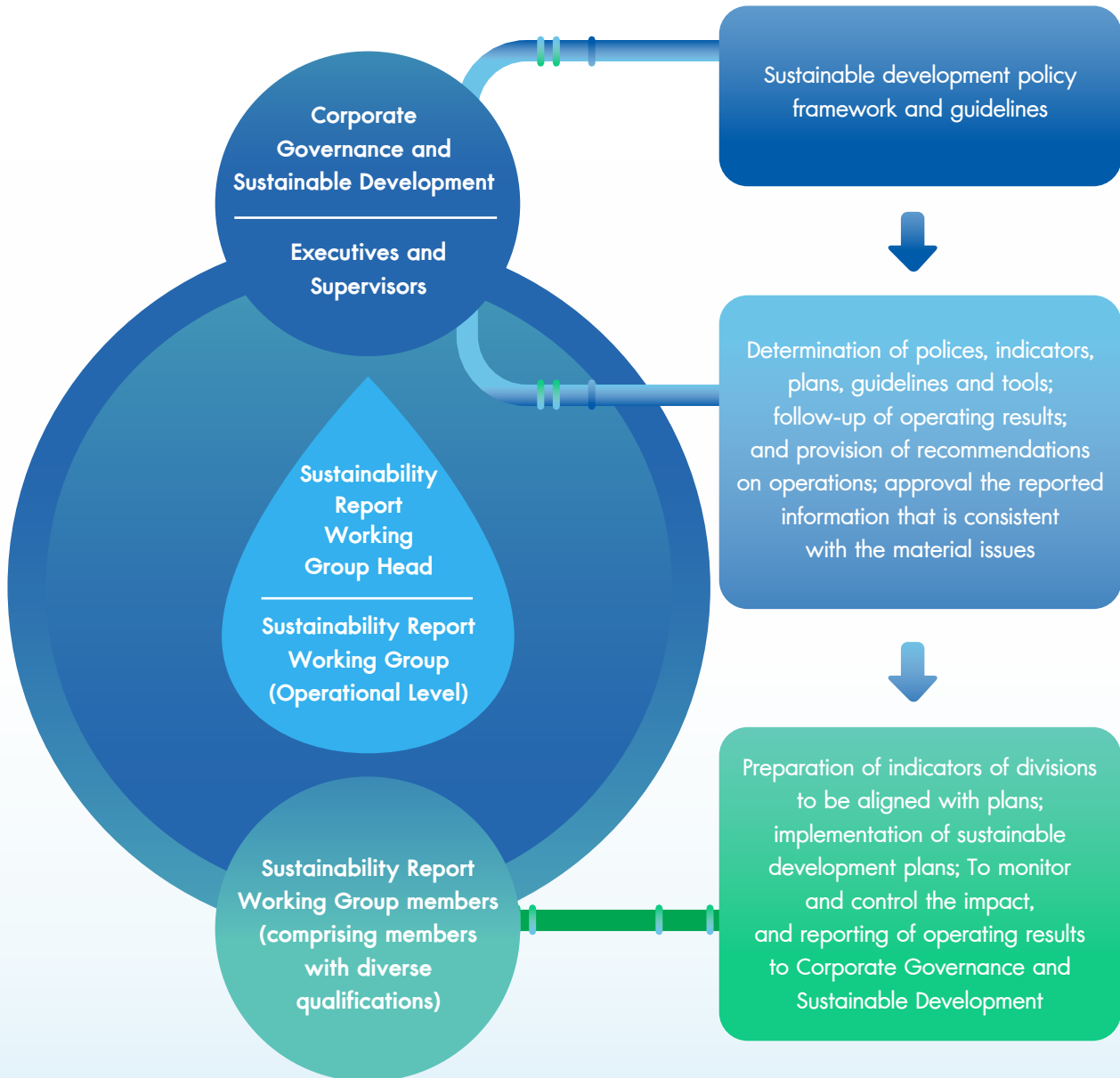


As at latest closing date 30 December 2022



## SUSTAINABILITY AT POLICY LEVEL

The Company managed its organizational sustainability across all dimensions including economic, environmental, and social dimensions based on internal and external factors through the Corporate Governance and Sustainable Development Committee. This enabled the Company to be prepared and ready to embrace any changes in a timely manner. The sustainability management structure is divided into 3 levels (Disclosure 2-2, 2-12, 2-13, 2-14, 2-16, 2-23, 2-24) as follows





The Company's operations have been focused on the cost-effective use of resources throughout the supply chain business processes along with the management of safety, occupational health, and working environment. In doing so, the Company adopted international requirements and standards as guidelines in its operations to drive sustainability. Such standards included Quality Management Systems Standard (ISO 9001:2015), Environmental Management Systems Standard (ISO 14001:2015), Occupational Health and Safety Management Systems (ISO 45001:2018), World Resource Institute's Organizational Greenhouse Gas Inventory, and Thailand Greenhouse Gas Management Organization (TGO)'s Standards of Greenhouse Gas Emission Calculation. These standards were key drivers of sustainable development in line with the Company's sustainable management policy. Details can be found in the Company website. ([www.eastwater.com](http://www.eastwater.com))

## SUSTAINABLE DEVELOPMENT NETWORK MEMBERSHIP

(Disclosure 2-28)



## SUPPLY CHAIN MANAGEMENT (Disclosure 2-6, 2-29)

In 2022, the Company's end-to-end business process was as follows:

### Good Corporate Governance

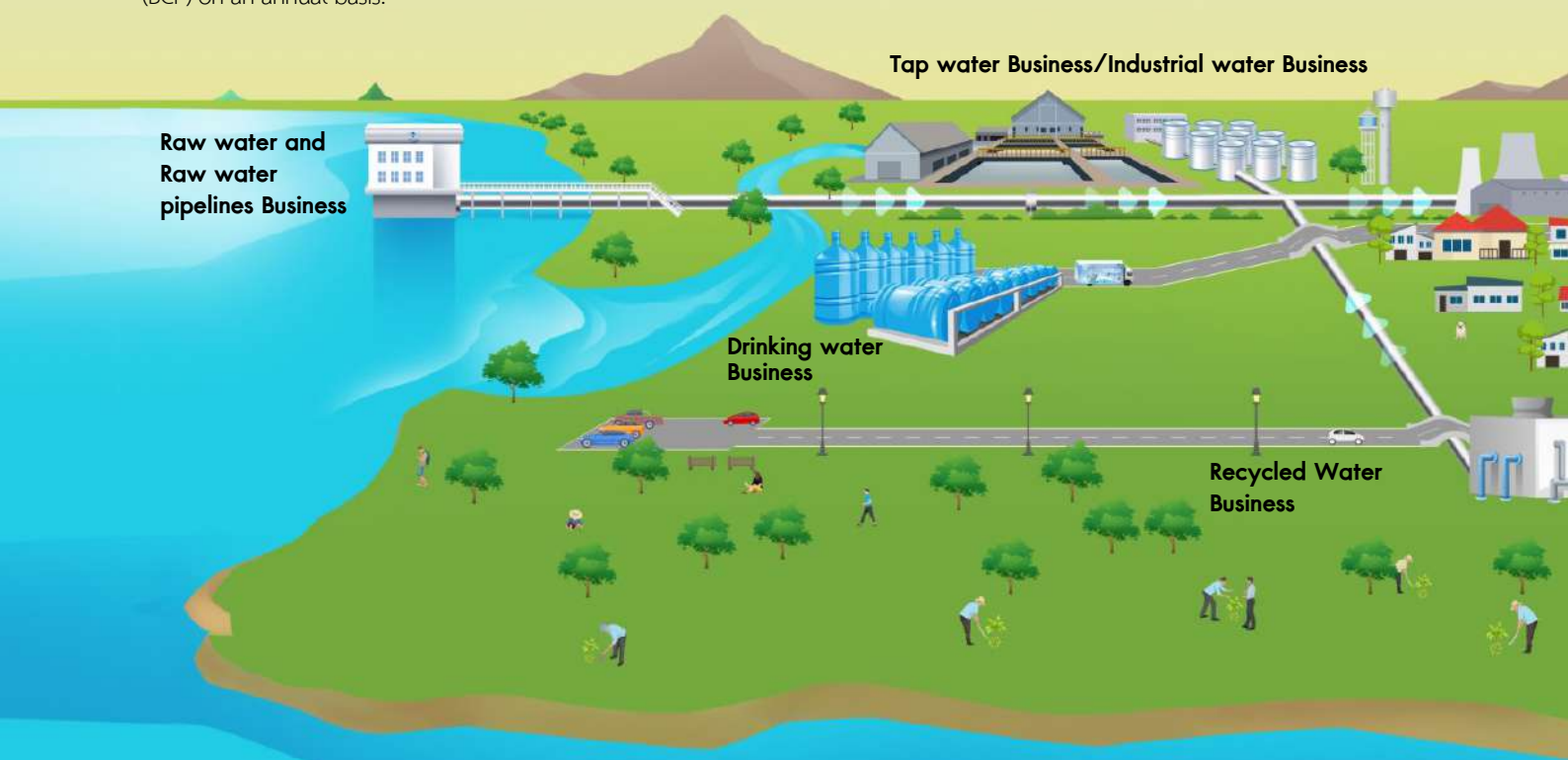
*(1. Regulatory bodies and government agencies relevant for business operations 2. Board of Directors 3. Executives and employees 4. Customers 5. Suppliers 6. Shareholders and investors 7. Communities and government agencies)*

Honest, transparent, and auditable operation is a Company's Code of Conduct to be complied by all employees as a basis for their operations. There is risk assessment and Business Continuity Management (BCM) & Business Continuity Planning (BCP) on an annual basis.

### Organization Management

*(1. Board of Directors 2. Executives and employees)*

The Company conducts business restructuring to ensure consistency with policies, strategies, and organizational development plan towards sustainable growth. The Board of Directors, executives, and employees drive the operations toward the same direction and organizational goals.



### Community Affairs and Corporate Image Management

*(1. Regulatory bodies and government agencies relevant for business operations 2. Executives and employees 3. Communities and government agencies 4. Mass media)*

In managing water to satisfy business needs, the Company considers the principle of sharing water resources to be sufficient for all sectors. Also, collaborative efforts are made to improve the well-being of the people in the communities and societies along the water grid of 523 km., through the 3 development projects namely the water utility and environment conservation promotion, the community well-being promotion, and the learning promotion.

### Contracts and Customer Relations Management

*(1. Regulatory bodies and government agencies relevant for business operations 2. Executives and employees 3. Customers 4. Suppliers)*

One of the Company's priorities is to manage contracts with its stakeholders across different groups by observing the principles of good corporate governance and monitoring the operations to ensure compliance with relevant contracts and standards. The Company also constantly improve its operation to achieve greater efficiency to satisfy the needs of its stakeholders as contract parties.

## Financial Management

(1. Shareholders and investors 2. Financial institutions 3. Executives and employees)

A focus is placed on sound internal controls and regular financial risk management. Annual financial reports are prepared using a database management system based on generally accepted standards and appropriate accounting policy. The reports are certified by an external auditor (Third Party) to ensure correctness and transparency which reflects good maintenance of financial credit ratings and continued confidence.

## Analysis and Development of Water Supply Sources and New Businesses

(1. Regulatory bodies and government agencies relevant for business operations 2. Executives and employees 3. Customers 4. Suppliers 5. Communities and government agencies)

The Company together with the government and private agencies analyze climate condition and water status in different areas and find way to develop the potential of water supply source to increase water reserve capacity. Total water solution business plan is prepared to respond to global climate change issues and to diversify products to meet customers' needs for sustainable business operation.



## Construction Project Management

(1. Regulatory bodies and government agencies relevant for business operations 2. Executives and employees 3. Customers 4. Suppliers 5. Communities and government agencies)

Construction is an important process that can affect almost every group of the Company's stakeholders. Therefore, the Company established a set of standards for working with stakeholders especially partners and communities while placing emphasis on uses of technologies and innovations in project management to enhance operational efficiency and prevent any possible impacts.

## Water Pumping System Development Management and Innovation

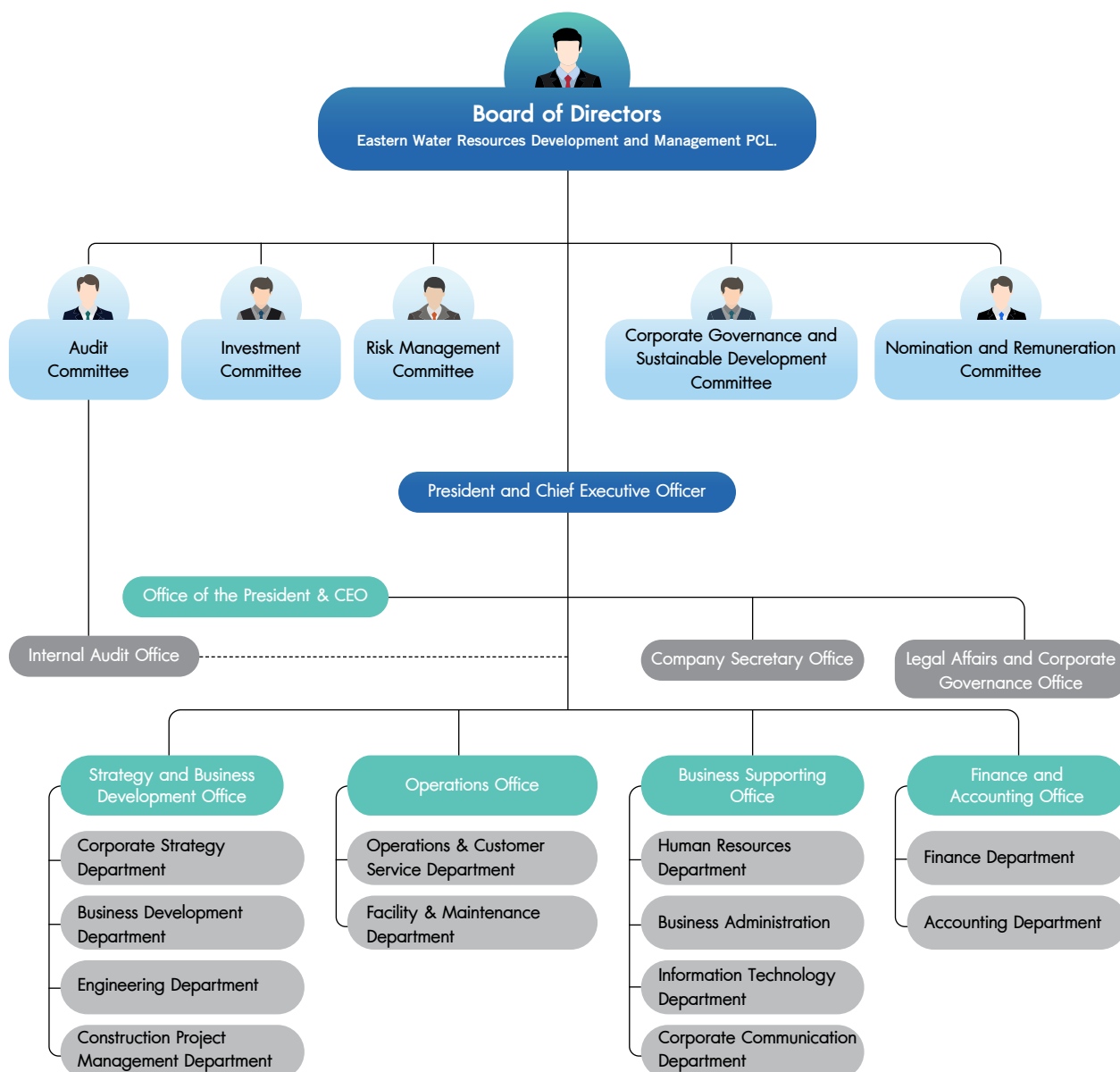
(1. Regulatory bodies and government agencies relevant for business operations 2. Executives and employees 3. Customers 4. Suppliers 5. Communities and government agencies)

Water pumping system is designed and developed through the adoption of modern water management innovations and technologies to improve speed and accuracy while reducing non-revenue water. Including adoption of modern technologies in designing total water solution system suitable for each user.

## CORPORATE GOVERNANCE STRUCTURE

(Disclosure 2-9)

The Board of Directors established 5 subcommittees to monitor and supervise the operations closely and to regularly report to the Board of Directors. They consisted of 1) Audit Committee, 2) Investment Committee, 3) Risk Management Committee, 4) Corporate Governance and Sustainable Development Committee, and 5) Nomination and Remuneration Committee. The subcommittees performed duties within the scope of laws, the Company's objectives and Articles of Association, and resolution of the shareholders' meetings; and had authority to take any actions within the scope of the Company's objectives and applicable laws.



The Board of Directors consisted of the members with diversified qualifications in terms of skills, experiences, capabilities, expertise, gender, and age. Details were as shown in the Board Skills Matrix. (Further details are available in Annual Report 2022 (Form 56-1 One Report) The Board of Directors' Composition topic in page 77 and Nomination, Development, and Performance Evaluation of the Board of Directors topic in page 92) (Disclosure 2-17)



The subcommittees with the key role in good corporate governance were: (Disclosure 2-10)

## **1. The Corporate Governance and Sustainable Development**

consisted of 3 independent directors with key duties in 2 areas namely 1) Corporate Governance, 2) Sustainable Development

Details are available in the Corporate Governance and Sustainable Development Committee Charter in the Company's website ([www.eastwater.com](http://www.eastwater.com)).

Reporting directly to the Legal Affairs and Corporate Governance Office, the Corporate Governance Division is responsible for supervising corporate governance work and coordinating with all entities in assessing the compliance with applicable laws, regulations, and rules by using the Law Compliance Checklist. The Corporate Governance Division also communicated good corporate governance practices to all employees and coordinate with the SEC and SET in disclosing all data and information as required by law.

In 2022, the Company reviewed the good corporate governance principles, the business group's code of conduct, and the internal anti-corruption policy to be updated with the current situation. In addition, the Company has established procedure to prevent repeated violation of the business group's code of conduct, and remedies in case of human rights violations.

At present, the Company has the Corporate Relations and CSR Division under the Corporate Communication Department responsible for community, social, and environmental activities at the operating sites to ensure sustainable business operations.

## **2. The Risk Management Committee**

consisted of 5 members with details as available in the Risk Management Committee Charter in the Company's website ([www.eastwater.com](http://www.eastwater.com)).

The Company's Risk Management and Quality System Division, under the Corporate Strategy Department, is responsible for preparing risk management manuals, as well as analyzing and reviewing risk factors and their impacts on the Company's successful business plan execution. It also proposes the suitable risk management guidelines which form a part of the Company's risk management plan and monitors the progress of enterprise-wide risk management operations of other departments for regular reporting to the Risk Management Committee. (Details as in the Annual Report 2022 (Form 56-1 One Report 2022) under Risk Management topic in page 48)

## **3. The Audit Committee**

consisted of 3 independent directors with details as available in the Audit Committee Charter in the Company's website ([www.eastwater.com](http://www.eastwater.com)).

## ABOUT THIS REPORT

(Disclosure 2-2, 2-3, 2-4, 2-5)

The Sustainability Report 2022 is the 12<sup>th</sup> in a series of the Company's annual sustainability report to disclose the corporate sustainability-related performance to reflect the Company's responsibilities towards its stakeholders in economic aspect and social and environmental aspect as they are significant to the Company's sustainable development. The contents were categorized based on approaches to manage impact on stakeholders in all core processes of business operations, which are known as the 6 sustainable approaches. This report was developed in accordance with the sustainability reporting framework of the Global Reporting Initiatives (GRI Standards 2021) at the limited assurance level. Information contain herein is for the reporting period of 1 January to 31 December 2022 for publishing in April 2023.

The scope of this report presents business operation information in 2022 covering business operations of Eastern Water Resources Development and Management Public Company Limited on raw water, tap water, industrial water, wastewater treatment, and recycled water, as well as the business operations of Universal Utilities Public Company Limited on surface tap water, wastewater treatment and recycled water, and operation and maintenance of total water solutions in Thailand.

This report contains information with significant changes from 2021 as follows:

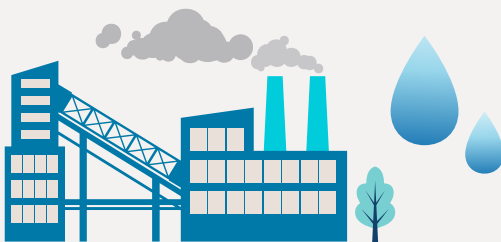
1



**In 2022,**

There is an additional report on the Company's complaint handling process and human rights operation process.

2



**In 2021,**

There was a report only on the energy consumption in the raw water pumping system and office buildings.

**In 2022,**

There is an additional report on fuel consumption of the Company's vehicles for operations.

3



**In 2021,**

There was a report only on the Carbon Dioxide emission from the water pumping system and office buildings.

**In 2022,**

There is an additional report on Carbon Dioxide emission from fuel of the Company's vehicles for operations.

This Sustainability Report was certified at the Limited Assurance level by a third-party assurance practitioner covering only the Company's operations, excluding the operations of UU PCL. with expertise in validating and assuring accuracy, completeness, and reliability of information disclosed according to the Global Reporting Initiative (GRI Standard). High-level executives were involved in the selection process in compliance with the Company's procurement regulations.

**Guidance for Determining Report Contents:** The Sustainability Report 2022 Working Group consists of representatives from all departments. The working group's brainstorming meetings were held to jointly review and analyze material sustainability topics; and conclusions were proposed to the President and CEO for consideration and endorsement and for reporting to the Corporate Governance and Sustainable Development Committee for acknowledgement before disclosure thereof in this Sustainability Report.


### Channels for Further Enquiries:



**Ms. Chatkaew Poomarin, Vice President, Corporate Communication Department**

Eastern Water Resources Development and Management Public Company Limited  
East Water Building, 1 Soi Vibhavadi Rangsit 5, Vibhavadi Rangsit Road, Chom Phon Subdistrict,  
Chatuchak District, Bangkok 10900

 Telephone : 02-272-1600

 E-mail : [pr@eastwater.com](mailto:pr@eastwater.com)

This and previous Sustainability Reports can be downloaded from the Company's Website  
([www.eastwater.com](http://www.eastwater.com))

## GUIDELINES FOR DETERMINING MATERIAL SUSTAINABILITY TOPICS OF EAST WATER GROUP

### Key Stakeholder Involvement (Disclosure 2-29)

The Company analyzed its groups of stakeholders from its work processes and prioritized them based on 2 factors namely stakeholders' influence on the Company and impacts of the Company's operations on its stakeholders. Thus, 6 groups of stakeholders were categorized as follows: **1) Customers, 2) Regulatory bodies and government agencies relevant for business operations, 3) Shareholders, investors and financial institutions, 4) Communities and government agencies, 5) Suppliers, and 6) Board of Directors, Executives and Employees.** Relevant units responsible for communication channels as well as strategic planning and action plans to respond to specific expectations of key stakeholder groups were as follows:

#### 1. Customer

##### 1.1 Company's customers

###### Method of Participation/Frequency

###### Annually

- Meetings between executives and key customers
- Satisfaction surveys (by external agencies)
- Project progress monitoring

###### Based on the Company's projects or each activity or complaint

- Meetings with customers to offer total water solutions and recommendations regarding project development

###### More than 1 time/year or quarterly

- Satisfaction surveys (by internal units)
- Water meter inspection
- Preventive maintenance of SCADA system

###### Monthly

- Water War Room Key man meetings
- Customer meetings
- Water quality analysis reports

###### At any time or throughout the year

- Customer meetings
- Customer complaints
- Communication and public relations via social media platforms such as the Company's Website, Facebook, SMS, Microsoft Teams, and Line group
- Meetings on special day occasions
- Water situation report

###### Expectations/Recommendations/Issues for improvement

1. Consistent water pressure control to be stable and sufficient for use
2. Water pumping management technology
3. Problem solving services that meet customers' objectives
4. Stability of water grid system to have extensive coverage with adequate water sources to meet the demand
5. Water quality that meets the standards specified in the contract
6. Additional channels for disseminating information, speed of information sharing, diversified service offerings and easy access
7. Services that respond to customers' needs
8. Preparation of sufficient amount of water to meet future demand

###### Impact on stakeholders

Controlling and stabilizing the water grid affects the business operations of the Company's customers



## 1. Customer

### 1.2 Customer (UU PCL.)

#### Method of Participation/Frequency

##### Per each service

- After-service satisfaction surveys (by external agencies)

##### At any time or throughout the year

- Customer complaints
- Communications and public relations via social media platforms such as the Company's Website, Facebook, SMS, Microsoft Teams, and Line group
- Meetings on special day occasions

#### Expectations/Recommendations/Issues for improvement

1. Tap water quality
2. Services of company staff and responses to customers' needs
3. Customer complaints and/or communication channels
4. Occupational health and safety for the stakeholders (employees, suppliers, customers, and communities)
5. Control measures to prevent and reduce negative impacts on communities

#### Impact on stakeholders

Tap water quality control and responding to customer needs affects the quality of life of Customer (UU PCL.)



## 2. Regulatory bodies and government agencies relevant for business operations

### Method of Participation/Frequency

#### Annually

- Studies on climate forecasts based on different climate models
- Satisfaction survey (by external agencies)

#### More than 1 time/year or quarterly

- Meetings with government agencies and water users
- Relations activities

#### Monthly

- Water War Room keyman meetings
- Meetings with government agencies

#### At any time or throughout the year

- Studies and compliance with requirements, rules, regulations, and laws
- Communications and public relations via social media platforms such as the Company's Website, Facebook, Line@, and Line group
- Meetings on special day occasions

### Expectations/Recommendations/Issues for improvement

1. Publicizing information to create understanding for the local community
2. Cost management with administrative risks; introducing innovations to increase stability, reduce water footprint, reduce cost, resulting in long-term balanced of water demand
3. Sourcing of additional water sources for backup purpose to support economic growth and ensure sufficient water for all sectors
4. Human resources and technological developments
5. Budget allocation for social and environmental care and continuous implementation of community well-being improvement projects

### Impact on stakeholders

The integration of water demands between the Company and government agencies affects the management of sufficient water for all sectors



### 3. Shareholders, investors, and financial institutions

#### Method of Participation/Frequency

##### Annually

- Annual General Meeting of shareholders (AGM)
- Satisfaction surveys (by external agencies)

##### More than 1 time/year or quarterly

- Management Discussion and Analysis sessions
- Site visit activities
- Bank relationship building activities

##### At any time or throughout the year

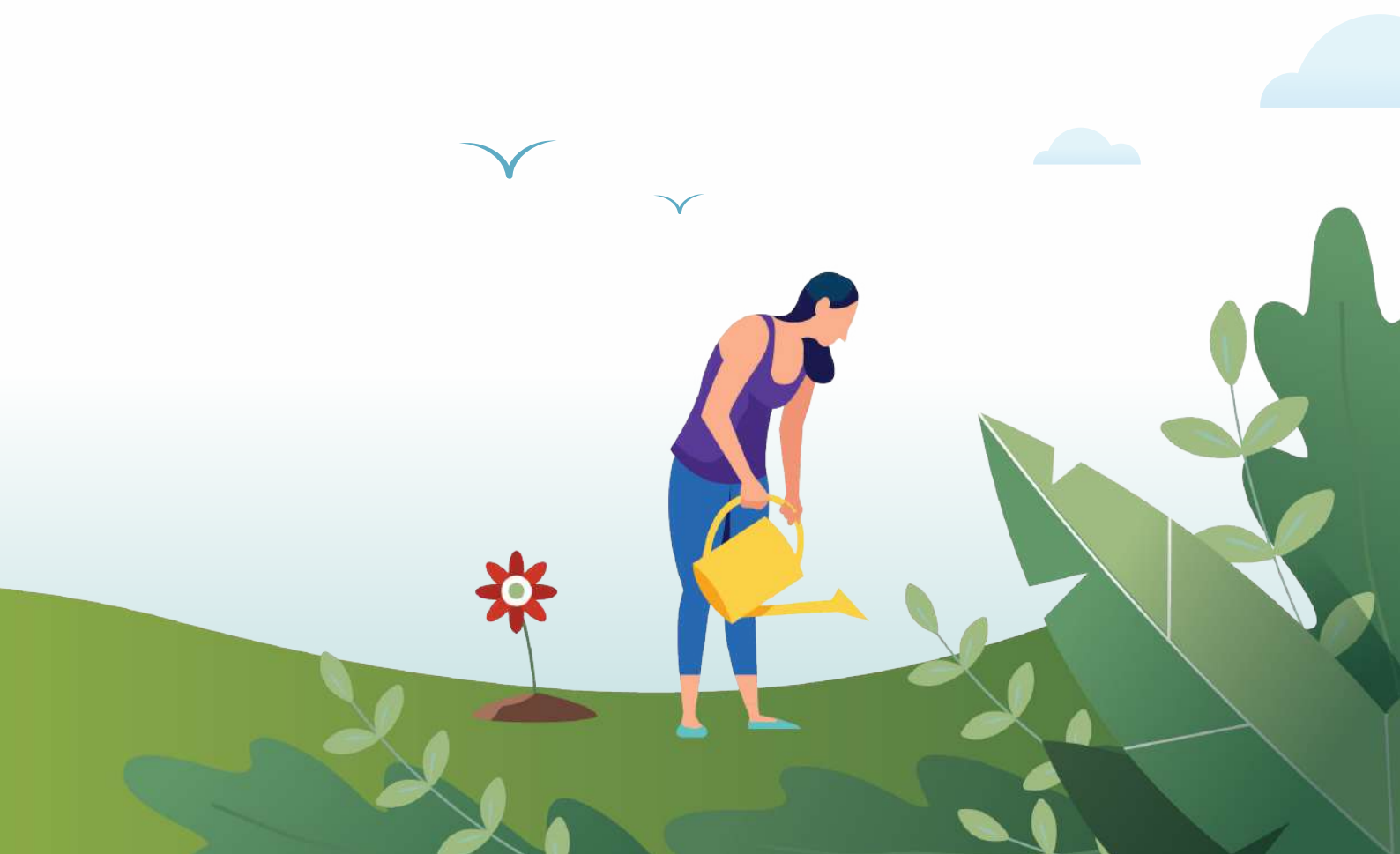
- Activities to communicate corporate performance to investors/shareholders such as Roadshow, Company visits, Conference calls, etc.
- Q&A sessions via telephone and E-mail

#### Expectations/Recommendations/Issues for improvement

1. Clarity of corporate vision and missions leading to the goals
2. Sustainable business growth, business expansion plan, and new investment projects
3. Construction project progress and total water solutions
4. Cost management and profit of the company
5. Innovation or technology in water pumping management
6. Measures to deal with risks affecting business

#### Impact on stakeholders

Sustainable business growth and business expansion plans including controlling environmental impacts such as energy consumption, greenhouse gas emissions, water resource usage, etc., affect the investment decisions of the shareholders, investors, and financial institutions



#### 4. Communities and local government agencies

##### Method of Participation/Frequency

###### Annually

- Satisfaction surveys (by external agencies)

###### Based on the Company's projects or each activity or complaint

- Public relations activities for projects
- Follow-up meetings on community-related issues and solutions
- CSR activity assessments

###### More than 1 time/year or quarterly

- Meetings with government agencies and groups of water users

###### Monthly

- Life quality and environmental improvement activities for communities

###### At any time or throughout the year

- Studies and compliance with requirements, rules, regulations, and laws
- Communications and public relations via social media platforms such as the Company's Website, Facebook, Line@, and Line group
- Meetings on special day occasions

##### Expectations/Recommendations/Issues for improvement

1. Development and management of water resources to be sufficient
2. Taking care of communities, continuous organizing communities well-being improvements projects
3. Publicizing corporate news and information regularly with usefulness
4. Attention to water quality
5. Speed of service including corrections of problems and complaints
6. Business operations that do not impact communities and environment
7. Budget allocation for social and environmental care and continuous implementation of community well-being improvement projects

##### Impact on stakeholders

Efficient water management, preparation of community well-being improvement projects, and complaint management affect the community well-being



## 5. Suppliers

### Method of Participation/Frequency

#### Annually

- Relations activities
- Satisfaction surveys (by external agencies)

#### Per each service or each price enquiry/tender or one time at first contract signing

- Clarification meetings for scope of work worth 1 million Baht up
- Anti-corruption policies
- Declaration of intent to fight corruption
- Supplier code of conduct for sustainable business development
- Policy on safety, occupational health, and working environment
- Notification of personal data processing

#### At any time or throughout the year

- Communications and public relations via social media platforms such as the Company's Website and Line group
- Registration of new suppliers

### Expectations/Recommendations/Issues for improvement

1. More convenient and faster procurement and acceptance procedure
2. Requirement for continuous organization of relations activities through meetings, seminars, or trainings
3. Information on the Company's workplan and future projects
4. Information on procurement methods and assessment of suppliers' quality of products and service

### Impact on stakeholders

Information on the Company's future project plans, and convenient and fast procurement and acceptance procedures affect the operation planning of suppliers

## 6. Board of Directors, executives, and employees

### 6.1 Board of Directors

#### Method of Participation/Frequency

#### More than 1 time/year or quarterly

- Site visit activities

#### Monthly

- Board of Directors' meetings

### Expectations/Recommendations/Issues for improvement

1. Good corporate governance
2. Complaint management
3. Systematic risk management
4. Sustainable business growth
5. Sustainable supplier management
6. Quality of products and services
7. Measures to tackle climate change and water data management
8. Changes in water quality in water sources
9. Environmental projects
10. Human rights and fair employment of labors
11. Personnel care and development towards national water organization
12. Safety, occupational health, and working environment
13. Standards for supervision of construction projects for the community
14. Community well-being improvement projects



## 6. Board of Directors, executives, and employees

### 6.2 Company's Executives and employees

#### Method of Participation/Frequency

##### Annually

- Satisfaction and employee engagement surveys (by external agencies)

##### More than 1 time/year or quarterly

- Meetings with 2 Workplace Welfare Committees
- CEO meet employee activities
- Relations activities

##### Monthly

- Management meetings
- Meeting with 2 committees on Safety, Occupational Health, and Working Environment

##### At any time or throughout the year

- Receipt of employee complaints
- Guidelines for Personal Data Protection of Employees and Job Applicants

#### Expectations/Recommendations/Issues for improvement

1. Work process with clear procedure, fast, and flexible
2. Career advancement and opportunities
3. Collaborative corporate culture
4. Quality of life and safety
5. Corporate stability

#### Impact on stakeholders

Human Resources Management affects the quality of life in terms of occupational health and safety of the Company's executives and employees

### 6.3 Subsidiaries' executives and employees

#### Method of Participation/ Frequency

##### Annually

- Satisfaction and employee engagement surveys (by external agencies)

##### More than 1 time/year or quarterly

- Meetings with 1 Workplace Welfare Committees

##### Monthly

- Management meetings
- Meeting with 1 committee on Safety, Occupational Health, and Working Environment

##### At any time or throughout the year

- Receipt of employee complaints

#### Expectations/Recommendations/Issues for improvement

1. Compensation and achievement recognition systems
2. Talent retention
3. Personnel development system and knowledge resources
4. Healthcare and safety for employees

#### Impact on stakeholders

Human Resources Management affects the quality of life in terms of occupational health and safety of the Company's executives and employees of UU PCL.

## MATERIAL SUSTAINABILITY TOPICS

The Company identified material sustainability topics based on internal and external factors. Internal factors included corporate governance principles adopted in its operations, policies, strategies, targets, and business plans. External factors included national and global interests and trends, complaints, as well as requirements, expectations, and recommendations of relevant stakeholders. Then, the Company prioritized material sustainability topics by categorizing material topics according to the corporate governance principles into 3 dimensions namely economic, social, and environmental dimension based on the following processes:

### 1 Collection of Material Sustainability Information and Issues

- Internal Information (policies, strategies, targets, business plans, and risk management plans) To identify key issues through the brainstorming of ideas from executives via workshops, preparation of strategies, and risk management plans with possible short-and long-term impacts on organizational sustainability.
- External Information (national or global trends and interests) To review national or global trends and interests in alignment with the Sustainable Development Goals (SDGs) and expectations of stakeholders through formal and informal surveys such as meetings, seminars, interviews, or dialogues as well as opinion and satisfaction surveys with each group of stakeholders.

### 2 Prioritization

After the material sustainability topics were identified based on the internal and external factors, the ratings and priorities were given according to 2 criteria. Then, those topics were specified in the Materiality Matrix which was divided into 2 axes.

- **Horizontal axis:** significant impact on economic, social, and environmental dimensions consider the severity level and likelihood of impact, both economic, social and environmental dimensions, business risks, legal requirements, as well as interest from stakeholder groups.
- **Vertical axis:** important issues that stakeholders pay attention to, including economic dimension, social dimension, and environmental dimension, as well as issues affecting both positive and negative decisions of stakeholder groups that may affect the Company.

### 3 Review of Report Contents

The material topics obtained from the analysis by the Sustainability Development Working Group of the East Water Group were proposed to the high-level executives for consideration and endorsement. Those topics were also endorsed by the Corporate Governance and Sustainability Development Committee to determine the content covering 3 dimensions namely economic, social, and environmental dimensions.

## MATERIAL SUSTAINABILITY TOPIC ASSESSMENT RESULTS 2022

### 1. Economic Dimension

- 1.1 Good corporate governance
- 1.2 Complaint management
- 1.3 Systematic risk management
- 1.4 Sustainable supplier management
- 1.5 Sustainable business growth
- 1.6 Quality of products and services

### 2. Environmental Dimension

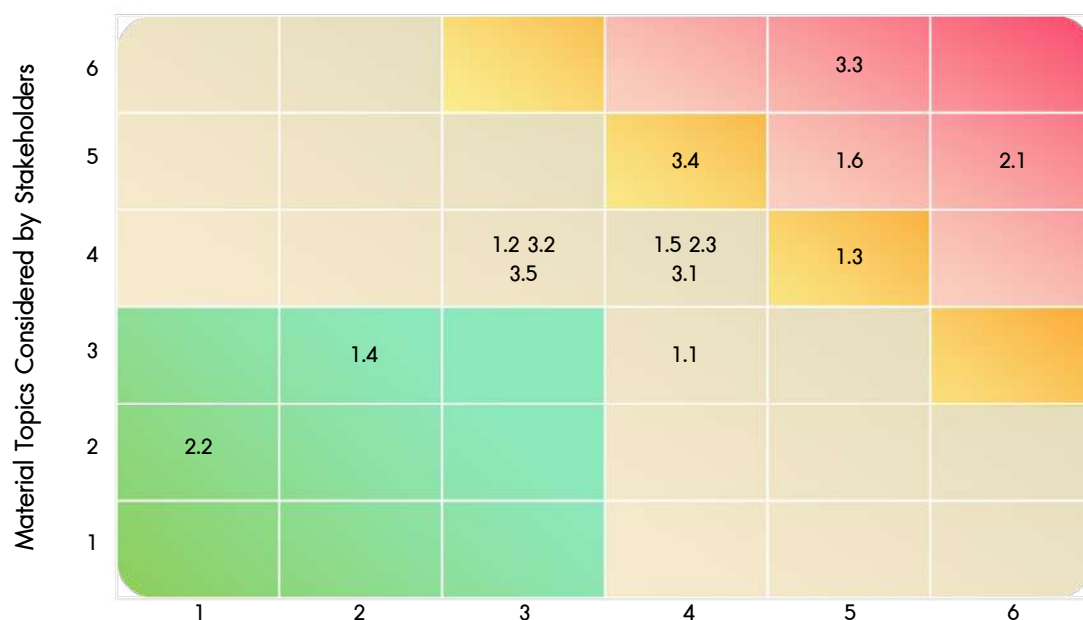
- 2.1 Measures to tackle climate change
- 2.2 Changes in water quality in water sources
- 2.3 Environmental projects

### 3. Social Dimension

- 3.1 Human rights and human resources management
- 3.2 Personnel care and development towards national water organization
- 3.3 Safety, occupational health, and working environment
- 3.4 Standards for supervision of construction projects for the community
- 3.5 Community well-being improvement projects

Remark : Topic 1.1 covered 3 dimensions (economic, social, and environmental)

### Materiality Matrix



Significant impact on economic, social, and environmental dimensions

## Materiality Matrix

Summary of 14 topics and 27 indicators

Topic Group	Material Topics considered by the Company/Stakeholders	Group of Stakeholders						EWG Sustainability Aspects	GRI Standard Title	Alignment with SDGs
		Customers	Regulatory bodies and government agencies relevant for business operations	Shareholders, investors, and financial institutions	Communities and local government agencies	Suppliers	Board of Directors, executives, and employees			
Economic Dimension	1. Good Corporate Governance	✓	✓	✓	✓	✓	✓	1. Good Corporate Governance principles	General Disclosures (2-23)	6.3, 9.1, 9.4 12.5, 12.7, 16.5
	2. Complaint management	✓	✓	✓	✓		✓	2. Complaint management	Anti-Corruption (205-1, 205-2, 205-3)	
	3. Systematic risk management		✓	✓			✓	3. Systematic risk management	Economic Performance (201-1)	
	4. Sustainable supplier management					✓	✓	4. Sustainable supplier management	General Disclosures (2-29)	
	5. Sustainable business growth	✓		✓		✓	✓	5. Sustainable business growth	Customer Health and Safety (416-1, 416-2)	
	6. Quality of products and services	✓	✓	✓	✓	✓	✓	6. Service-mindedness and product quality standards		
Environmental Dimension	1. Measures to tackle climate change	✓	✓	✓	✓	✓	✓	1. Climate Change Response towards Integrated Water Management	Economic Performance (201-2)	6.1, 6.4, 6.5, 12.2, 12.3, 12.5, 13, 15.3
	2. Changes in water quality in water sources				✓		✓	2. Care for water quality in water sources	Energy (302-3) Emissions (305-2)	
	3. Environmental projects	✓	✓	✓	✓	✓	✓	3. Environmental projects	Water and Effluents (303-1, 303-3, 303-5)	
Social Dimension	1. Human Rights and Human Resource Management	✓		✓		✓	✓	1. Human Resources Management	General Disclosures (2-23)	2.1, 2.4, 4.3, 4.4, 4.5, 5.1, 6.3, 6.6, 8.5, 8.9, 15.1, 15.2
	2. Personnel care and development towards sustainable water organization	✓	✓	✓		✓	✓	2. Quality of life care and personnel development towards sustainable water organization	Employment (401-1) Training And Education (404-1, 404-2, 404-3)	
	3. Safety, occupational health, and working environment	✓	✓	✓	✓	✓	✓	3. Knowledge sharing to society	General Disclosures (2-25, 2-29, 2-30)	
	4. Standards for supervision of construction projects for the community	✓	✓	✓	✓		✓	4. Safety, occupational health, and working environment	Occupational Health And Safety (403-1, 403-5, 403-9)	
	5. Community well-being improvement projects	✓	✓	✓	✓		✓	5. Responsibilities for construction impacts	Local Communities (413-2)	
								6. Community sustainability projects	Economic Performance (201-1, 201-3) Indirect Economic Impacts (203-1)	

## ECONOMIC DIMENSION

Operational targets of Eastern Water Resources Development and Management Public Company Limited only, not include UU PCL.

### Targets for 2022

#### Good Corporate Governance



The Company to receive  
CGR assessment at an

**Excellent level.**

The Company to continue to be in the list of THSI.

#### Business Growth and Quality of Products and Services

The Company to maintain ISO 9001:2015, ISO 14001:2015  
certified and to receive ISO 45001:2018 certified.

Stakeholders'

**Satisfaction**

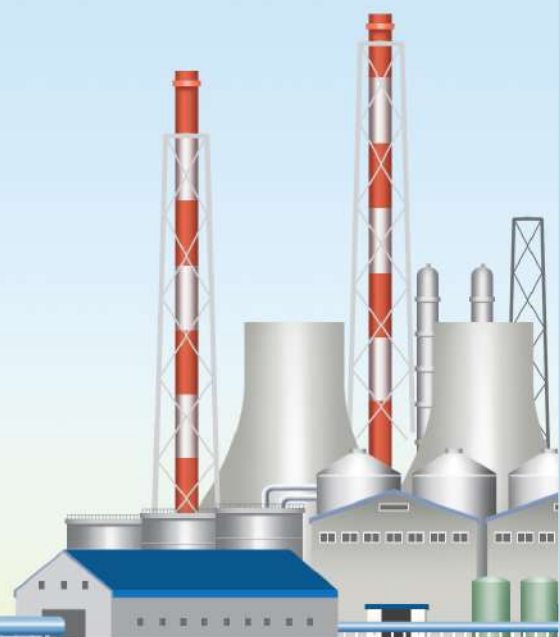
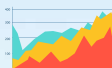
to be more than

**85.86%**



#### Total net profit for 2022

compares with budget for 2022 to be  
higher than 5.00%.



### Increase the capability of the trunk transmission main system

Aiming to develop the trunk transmission main system  
to accommodate an increase water demand in the eastern region  
and create economic stability for the country



## Performance results for 2022

### Good Corporate Governance

The Company was on of 170 listed companies listed in the



**Thailand Sustainability Investment (THSI)**

list from the SET for the 8<sup>th</sup> consecutive year.

The Company received honorary Sustainability Disclosure Award from Thaipat Institute.

The Company received the Outstanding Award for Sustainable Role Model Organization in the Thai Capital Market for

**Supporting the Disabilities 2022**

from the Securities and Exchange Commission.



The Company received an Excellent rating

**96.00%**

from the Thai Institute of Directors (IOD)'s 2022 Corporate Governance Report of Thai Listed Companies (CGR).



The Company was 1 of 28 companies that passed the renewal of certification from the

**Collective Action Against Corruption**

for 2021-2024 (2<sup>nd</sup> time).

The Company received a

**100% score**

from the Thai Investors Association's quality assessment of the 2022 Annual General Meeting of Shareholders.

### Business Growth and Quality of Products and Services (Disclosure 201-1, 201-3, 201-4, 203-1)

The Company has been certified with ISO 9001:2015, ISO 14001:2015, and ISO 45001:2018 standards

Stakeholders'

satisfaction score of **90.07%**



Revenue of

**4,366,636,116 Baht<sup>1</sup>**

(Sales and Service Revenue of 97.62%, Other revenue 2.38%)



Net Profit

**712,812,498 Baht**

Income tax to the government **189,312,273 Baht<sup>2</sup>**



Increased deductible expenses 1,467,356 Baht



Community development investment

**18,546,992 Baht**



Operating expenses 547,546,229 Baht

Interim dividends to shareholders

**0.12 Baht<sup>3</sup>**

Wages and welfare for employees of the East Water Group

**388,269,943 Baht**

#### Remarks :

<sup>1</sup> Consolidated financial statements of East Water Group (Detail in Annual Report 2022 (Form 56-1 One Report) Financial Statements and Separate Financial Statements topic in page 110)

<sup>2</sup> Refer to income tax of East Water Group for 2022

<sup>3</sup> In 2022, Interim dividends for the performance for the first half of the year was paid according to the resolution of the Board of Directors at its meeting No. 9/2022 dated 29 August 2022 at the rate of 0.12 Baht per share. The Board of Directors will submit to the Annual General Meeting of Shareholders for 2023 to approve payment of dividends for performance of July-December 2022 on 20 April 2023.

## Targets for 2023

### Good Corporate Governance

The Company to maintain ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018 certified.

The Company to receive CGR assessment at an

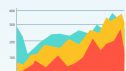
**Excellent level.**

The Company to continue to be in the list of **THSI**.

### Business Growth and Quality of Products and Services

**Total net profit for 2023**

compares with budget for 2023 to be higher than 5.00%.



Stakeholders'

satisfaction **85.00%** to be more than



## GOOD CORPORATE GOVERNANCE

(Disclosure 205-2)

The Board of Directors formulated the Good Corporate Governance (CG) policy in writing in 2003, and the Company later revised the CG policy according to the Office of the Securities and Exchange Commission (SEC)'s 2017 Corporate Governance Code for Listed Companies. The Corporate Governance and Sustainable Development Committee was assigned by the Board of Directors to screen and review this group-wide CG policy and practice on an annual basis to ensure compliance with changing laws, regulations, and rules as well as recommendations by applicable institutions and international practices before submission thereof to the Board of Directors for consideration and approval.

The Company complied with its CG Code which contains 8 principles (Further details in Annual Report 2022 (Form 56-1 One Report) Good Corporate Governance topic in page 70). The East Water Group's CG Code and Code of Conduct were published in electronic forms via the Company's website at [www.eastwater.com](http://www.eastwater.com) and Internal Web to facilitate convenience of searching. The relevant documents were also distributed to the Board of Directors and all employees for acknowledgement.

### Good Corporate Governance and Anti-Corruption Promotion Activities for 2022

(Disclosure 2-17)

In 2022, the Company conducted a number of activities and enabled the access to internal and external seminars to promote the good corporate governance and anti-corruption principle for the executives and employees of the East Water Group as follows:







Date	Course/Activity	Company's participants	Subsidiaries' participants	Total participants	* Percent of all employees (%)	Employee level			Region				Type of employment	
						Executive (Person)	Superior (Person)	Operating (Person)	Central (Person)	Northern (Person)	Eastern (People)	Western (Person)	Permanent employee	Contract employee
21 Feb. 22	Corruption Risk and Control Workshop (CRC) Online	1	1	2	0.54	1	0	1	0	2	0	0	2	0
23 Mar. 22	Personal Data Protection Act-Compliance (Executive Level)	1	0	1	0.27	0	0	1	0	1	0	0	1	0
20 Apr. 22	Labor Laws that Employers and Employees Must Know	0	1	1	0.27	0	0	1	0	1	0	0	1	0
21 Apr. 22	Road to Certify	0	2	2	0.54	0	1	1	0	2	0	0	2	0
22 Apr. 22	Final Preparation for 'PDPA'	0	3	3	0.81	0	1	2	0	3	0	0	3	0
6 May 22	e-Auditing & Automation New Auditing	0	1	1	0.27	0	0	1	0	1	0	0	1	0
12 May 22	Civil Law and Criminal Law in Labor Law	1	0	1	0.27	1	0	0	0	1	0	0	1	0

Date	Course/Activity	Company's participants	Subsidiaries' participants	Total participants	* Percent of all employees (%)	Employee level			Region				Type of employment	
						Executive (Person)	Superior (Person)	Operating (Person)	Central (Person)	Northern (Person)	Eastern (People)	Western (Person)	Permanent employee	Contract employee
19 May 22	Discipline and Punishment Management	2	0	2	0.54	0	0	2	0	2	0	0	2	0
31 May 22	Human Rights Risk Assessment	39	0	39	10.48	1	28	10	0	30	9	0	39	0
8-9 Jun. 22	HR How to Manage PDPA (Learning by Doing)	1	0	1	0.27	0	0	1	0	1	0	0	1	0
20 Jun. 22	Principles and Roles of Comprehensive Human Rights Audit for Executives	13	0	13	3.49	13	0	0	0	10	3	0	12	1
22 Jun. 22	New Normal Management of Wage, Remuneration, and Benefits	5	0	5	1.34	0	2	3	0	5	0	0	5	0
1 Jul-30 Sep. 22	Human Rights Knowledge (Course in accordance with the Company's business policy)	136	0	136	36.56	10	17	109	1	80	55	0	135	1
4 Jul-31 Aug. 22	Company Secretary Professional Development Program	1	0	1	0.27	0	1	0	0	1	0	0	1	0
7-8 Jul. 22	Interesting Supreme Court Ruling on Personnel Management	2	0	2	0.54	0	1	1	0	2	0	0	2	0
20-21 Jul. 22	Fraud Risk Management Framework	1	0	1	0.27	0	0	1	0	1	0	0	1	0
3-4 Aug. 22	Labor Cases and Good Management	1	0	1	0.27	0	0	1	0	1	0	0	1	0
10 Aug. 22	Lessons Learned on Personal Data Protection Act B.E. 2562 for HR	2	0	2	0.54	0	0	2	0	2	0	0	2	0
15 Sep. 22	Labor Laws for Human Resource Department	0	2	2	0.54	0	0	2	0	2	0	0	2	0
1-30 Nov. 22	Regulations of the Federation of Accounting Professions on Professional Ethics (E-Learning)	1	0	1	0.27	1	0	0	0	1	0	0	1	0
4 Nov. 22	Hot Issues in Law and Labor Cases 2022	1	0	1	0.27	1	0	0	0	1	0	0	1	0

Date	Course/Activity	Company's participants	Subsidiaries' participants	Total participants	* Percent of all employees (%)	Employee level			Region				Type of employment	
						Executive (Person)	Superior (Person)	Operating (Person)	Central (Person)	Northern (Person)	Eastern (People)	Western (Person)	Permanent employee	Contract employee
1-30 Dec. 22	Code of Conduct and Anti-Corruption	230	142	372	100	27	53	287	1	195	170	6	370	2
21 Dec. 22	Labor Law for Superior	0	46	46	12.37	7	13	26	0	22	20	0	46	0
29 Dec. 22	Research Ethics in Human	0	1	1	0.27	0	1	0	0	1	0	0	1	0

**Remark :** \*Total number of East Water Group's employees was 372 people, divided into 230 Company's employees and 142 Subsidiaries' employees.

To ensure that all the employees had knowledge and understanding regarding the East Water Group's code of conduct and the anti-corruption policy, the Company has organized online training and tests to measure the level of knowledge and understanding of all employees and to improve communication and raise awareness of their duties in working ethically and transparently leading to sustainable business operations.

Test : East Water Group code of conduct			Test : Anti - Corruption		
					
Target: 100%	Number of participating employees (Person) : 372	Qualifying Percentage : 100	Target: 100%	Number of participating employees (Person) : 372	Qualifying Percentage : 100

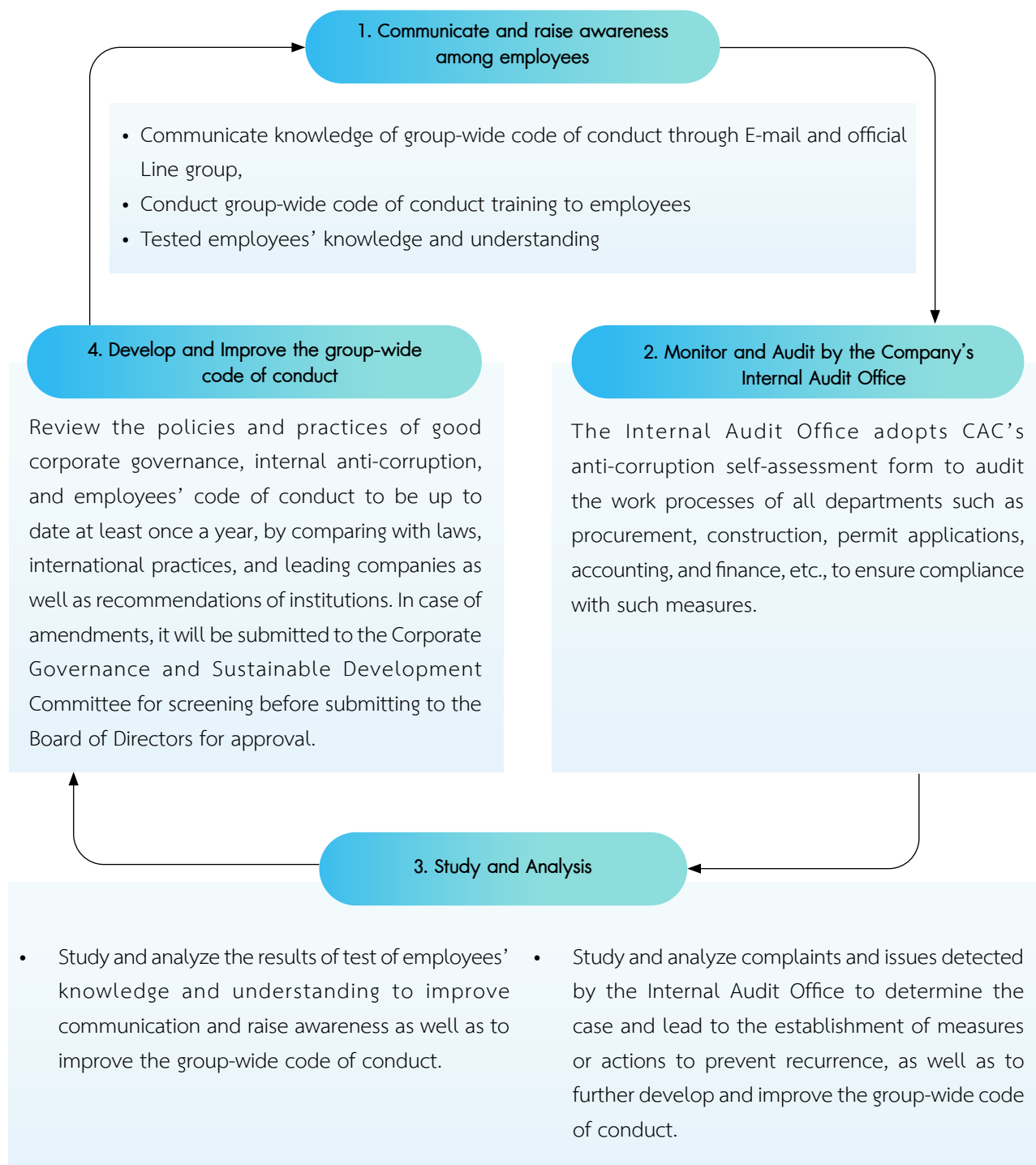
In addition, the Company has measures in place to protect the complainant or those who cooperate or assist in the investigation with good faith. The Company may consider the merits of the employee who gives the whistleblowing beneficial to the Company's operations. When there is any clues or complaints through various channels, the collector and executor will submit the matter to the Secretary of the Audit Committee. If the complaint is an anonymous card and does not specify clear information, the Company may consider it as deemed appropriate. If there is a basis, an investigation and disciplinary committee will be appointed. If found guilty, disciplinary action will be taken in accordance with work rules. Legal action will be taken in case of violation of laws.

In 2022, the Company received reports of complaints and whistleblowing or finding of any corruption or violation of rights or committing an unlawful act or violation of the East Water Group code of conduct or lack of good internal control which could be summarized as follows: (Disclosure 205-3)

Violation of East Water Group code of conduct			at the end of 2022	
Violation of human rights and labor	Corruption	Violation of the code of conduct for procurement	Consideration completed	Under consideration at the end of 2022
2022 (Issue) : 2 Percentage : 28.57	2022 (Issue) : 2 Percentage : 28.57	2022 (Issue) : 3 Percentage : 42.86	2022 (Issue) : 5 Percentage : 71.43	2022 (Issue) : 2 Percentage : 28.57
Total 7 Issue			Matter examined and found to be guilty 2022 (Issue) : 0 Percentage : 0	

As the end of 2022, the investigation and disciplinary committee has considered 7 issues and found that 5 issues had no basis for complaint. Other 2 issues were under consideration. (Further details in Annual report 2022 (Form 56-1 One Report) Whistleblowing topic in page 99)

However, the Company has procedures in place to prevent repeated violation of the East Water Group code of conduct as follows





## COMPLAINT MANAGEMENT

(Disclosure 2-16, 2-25, 2-26)

The Company values the feedback of stakeholders throughout its supply chain. It has put in place complaint handling process for its stakeholder by establishing a unit responsible for handling various complaints received from various channels as well as to have systematic complaint handling mechanism to reduce business risk. This is to demonstrate the Company's commitment to corporate social responsibility, transparent business operations, and promotion of good relationships with its stakeholders. The Company also applied the lesson learned to drive business operations towards sustainable organizational development.

### Complaint Channels

Complaint Channels	Key Stakeholders						
	Company's customers	Subsidiaries' customers	Regulatory bodies and government agencies relevant for business operations	Shareholders and investors	Communities and local government agencies	Suppliers	Board of Directors, executives, and employees
1. The Company's website: www.eastwater.com	✓	✓	✓	✓	✓	✓	✓
2. The Company's internal web: The system for receiving suggestions, whistleblowing, and complaints.							✓
3. E-mails: Audit Committee : AC_EW@eastwater.com President & CEO : CEO@eastwater.com Company Secretary : Whistleblowing@eastwater.com	✓	✓	✓	✓	✓	✓	✓
4. Regular mails: Eastern Water Resources Development and Management Pcl. East Water Building, 25 <sup>th</sup> Floor, 1 Soi Vibhavadi Rangsit 5, Vibhavadi Rangsit Road, Chom Phon Subdistrict, Chatuchak District, Bangkok 10900	✓	✓	✓	✓	✓	✓	✓
5. Line Official Account (Eastwater CSR)					✓		
6. The Company's Facebook page: (@eastwfanpage)	✓	✓	✓	✓	✓	✓	✓
7. Line group	✓	✓	✓	✓	✓	✓	✓
8. Hotline or Call Center		✓					
9. Comment Boxes in Bangkok and Rayong Offices							✓
10. Meetings or relations activities	✓	✓	✓	✓	✓		
Number of complaints	1*	20,246**	0	0	0	0	7***
Number of complaints that have been resolved	1	20,246	0	0	0	0	5
Number of pending complaints	0	0	0	0	0	0	2
Measures to prevent recurrence (completed)	1	1	0	0	0	0	1
Measures to prevent recurrence (ongoing)	0	0	0	0	0	0	0

**Remarks :**

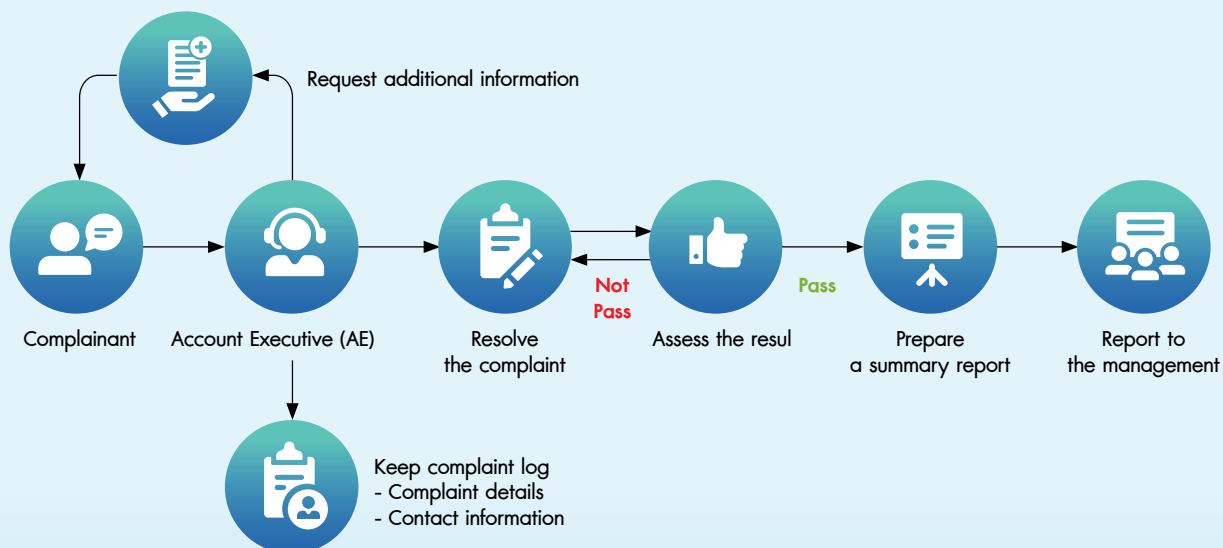
\* Further details available under Measures to prevent customer complaints (raw water) in page 50

\*\* Further details available under Measures to prevent customer complaints (tap water) in page 53

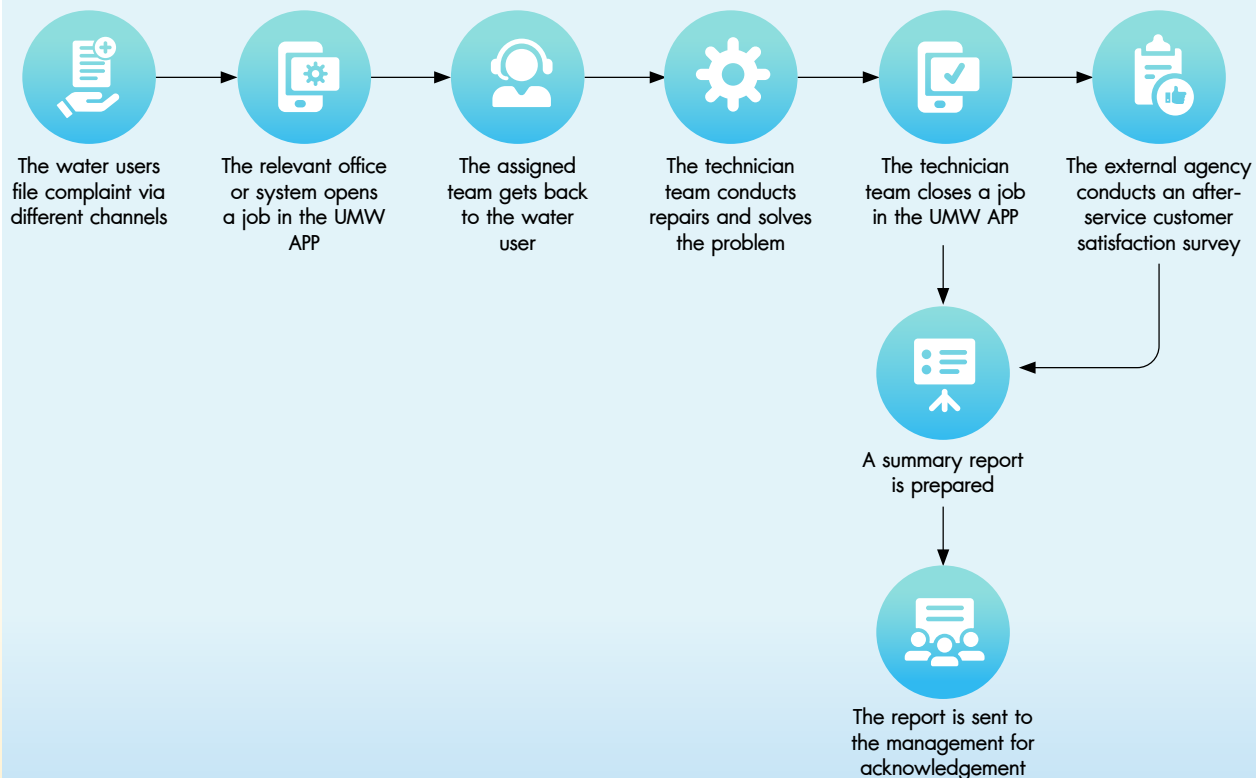
\*\*\* Further details available in Annual Report 2022 (Form 56-1 One Report) under Whistleblowing topic in page 99

## Complaint Handling Process

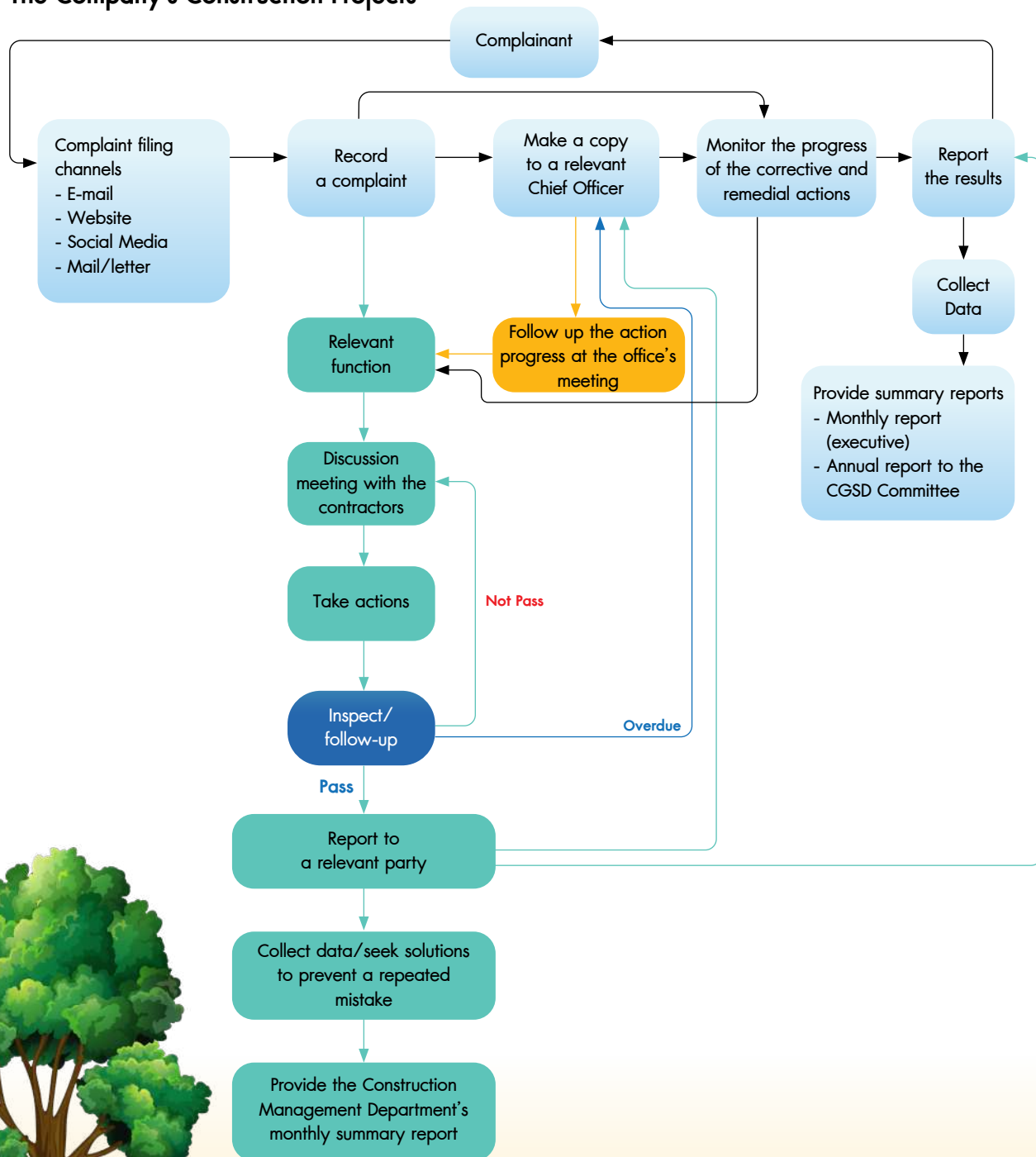
### The Company's Customers (raw water)



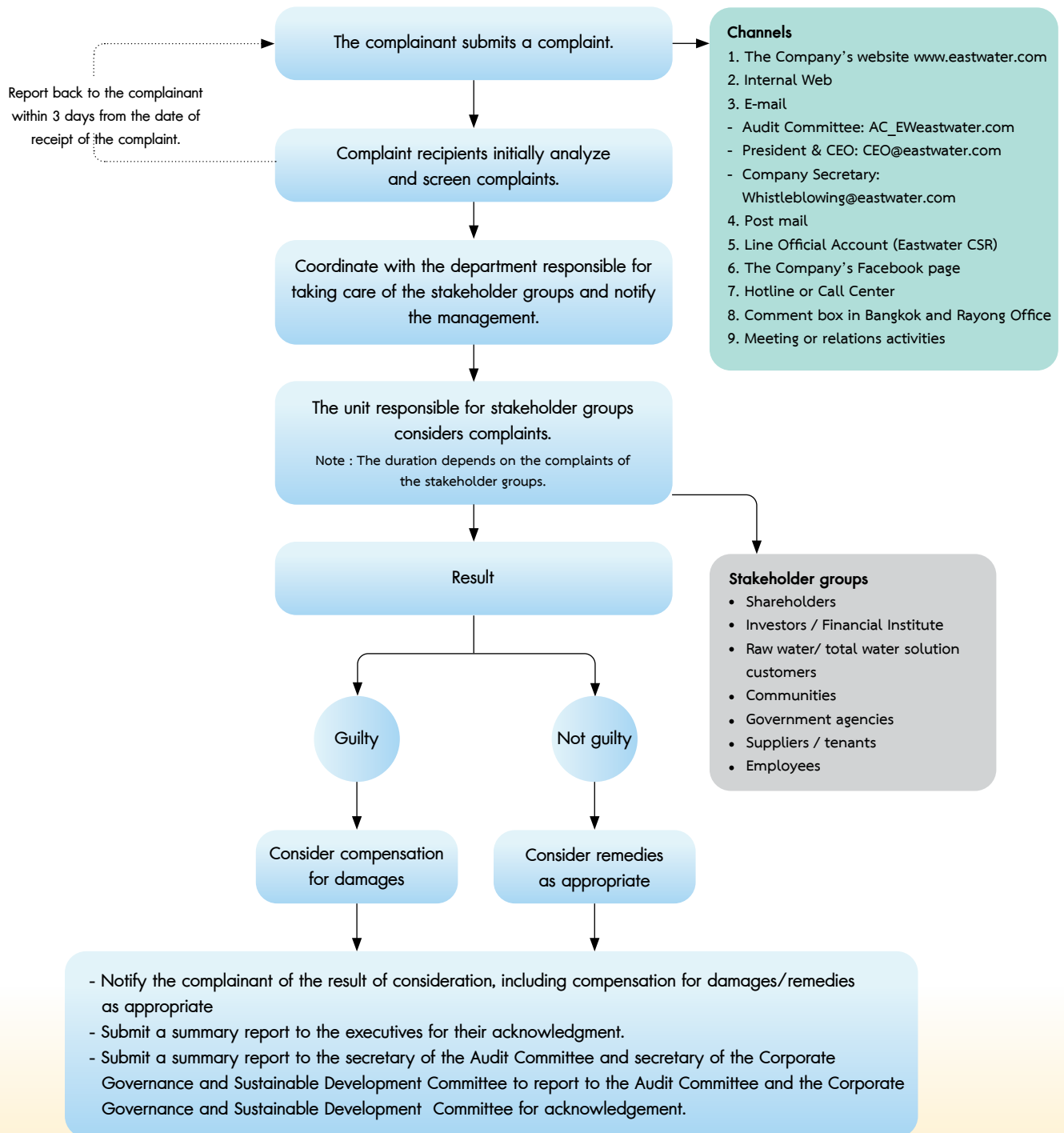
### Subsidiaries' Customers (tap water)



## The Company's Construction Projects



## Human Rights



### Remark :

Human rights complaints such as complaints about labor rights, community rights, suppliers' rights, shareholders' rights, investors' rights, financial institutions' rights, customers' rights, complaints about natural resources and the environment, etc.

## SYSTEMATIC RISK MANAGEMENT

Enterprise risk management (ERM) is a policy to manage and supervise an organization to achieve efficiency. ERM enables analyzing and anticipating potential events or risks from internal and external factors that may arise. Thus operational priorities, preventive and corrective measures, and management guidelines can be identified to improve efficiency of decision-making process, hence better operating results and mitigated chances or consequences of such risks. Moreover, opportunities amid crises are assessed for the Company's sustainable growth. The Company determines risk management strategies and systems that are aligned with the quality management system standards. In doing so, the Company is required to understand its context, objectives, as well as shareholders' expectations for assessing risks and business opportunities.

As part of the ERM practice, the Company developed its Business Continuity Management (BCM) by laying down a holistic management system covering crisis management plan, crisis communication plan, and business continuity plan connecting all agencies across the organization.

### Risk Management Structure

Risk management structure involves the creation of a control project based on consideration of relationships between different resources, work processes, and internal management procedure. The scope, duties and responsibilities are defined as follows:



**Risk Management Committee**

- To formulate and review a corporate risk management policy in all aspects one a year to ensure alignment with the corporate objectives, main goals, and strategies.
- To supervise and support risk management as part of a corporate culture.
- To regularly monitor and assess the impact and likelihood of identified risks in order to prioritize and manage such risks appropriately.

**Management Team**

- To promote and monitor risk management to ensure efficiency and suitability.
- To consider, endorse, and approve risk management plans.
- To consider risk management results and suggest guidelines for improvement.

**Risk Management and Quality System Division, Corporate Strategy Department**

- To provide a standardized risk management system and process throughout the organization.
- To implement the risk management process and comply with risk control measures
- To report and monitor results of key risk management plan implementation to the management for consideration
- To communicate and advise on risk management and provide suggestions regarding procedure and method of risk management to enable well-informed decision-making regarding risk management and an understanding about the necessities and scope of work; and to support exchange of data between relevant parties for a common understanding of concepts, principles, and practices for efficient risk analysis and management.

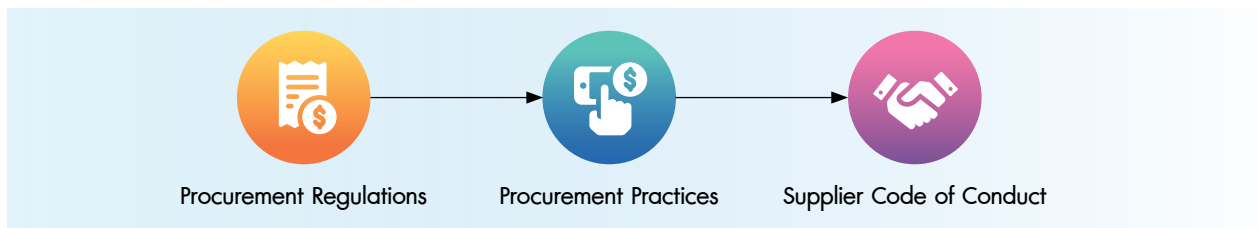
**Risk Owners and All Employees**

- To provide relevant data support to the Risk Management Working Group
- To cooperate in the implementation of the risk management plan
- To participate in determining risk management methods and its implementation
- To manage risk items within desirable level and scope while providing risk assessments and reviews at appropriate intervals and as necessary
- To analyze the progress of the action plan implementation
- To comply with the guidelines of the internal control system in the relevant tasks

The Company required risk identification to cover 6 types of risks, namely 1. Strategic Risk, 2. Operational Risk, 3. Financial Risk, 4. Compliance Risk, 5. Environmental, Social, and Community Risk, and 6. Information Technology Risk. In 2022, the Company specified risk factors and risk management guidelines in Annual Report 2022 (56-1 One Report) (Further details are available in Annual Report 2022 (56-1 One Report) under Risk Management topic in page 48 and Internal Control topic in page 101 (Disclosure 205-1)



## SUSTAINABLE SUPPLIER MANAGEMENT (Disclosure 205-2)



The East Water Group supply chain supplier management guidelines were implemented with a focus on the suppliers' capacity building to share sustainable growth with the East Water Group. The Company was committed to its procurement regulations and practices and the supplier code of conduct while taking into consideration sustainability issues. This was to express the East Water Group's determination to sustainability, to provide a norm for the group-wide procurement process, and to strengthen relationships with the suppliers. The Company held several activities to promote the engagement with its suppliers every year.

The East Water Group attaches great importance to choosing the right supplier with the commitment that was in line with the principles of responsible operations. This is to ensure that the Group purchases responsible products and services while encouraging suppliers and business partners to uphold and comply with our commitment to fundamental rights. For the treatment of employees, there shall be no forced labor and child labor, no involvement in human trafficking, and provide good working conditions with a focus on safety and occupational health. They shall also manage pollution risk and environmental impacts. We believe that these principles are fundamental to gaining social acceptance which impacts sustainability. They are tools to drive action through participation and transparency.

### EWG Supplier & Tenant Day 2022

The East Water Group is committed to raising awareness of human rights policy to create understanding of human rights for suppliers, tenants, and all employees of the Group, and preventing human rights violations of all stakeholders from their business operations throughout the supply chain. The EWG Supplier & Tenant Day was held under the theme of "ESG: Business and Human Rights in Supply Chains" covered international standards in respect of human rights, guidelines for preventing human rights violation, and human rights risk assessment. Mr. Anantachai Yoonprathom, a lecturer from SBDI have shared knowledge and answered the queries. A total of 106 people from suppliers, tenants, and employees participated through Virtual Conference system.



# Respect for human rights

Respecting human rights is an opportunity to change everyone's lives.





## SUSTAINABLE BUSINESS GROWTH

(Disclosure 203-2)

The COVID-19 pandemic caused the disruption in the industrial production chain. This was an important impetus for entrepreneurs to diversify their production bases in many countries that were close to the production site, thus reducing the complexity and distance of the production site closer to the country of the entrepreneur. As a result, the global value chain tends to be shorter and more dispersed. Based on the forecast of the nature of the global value chain, over the next 5 years, the Thai industrial sector will become more involved in the global value chain, and most of them will remain in the downstream industries due to their higher competitiveness, whether food and beverage industry, and computer and electronics industry. In addition, the government has a policy to promote and push the eastern seaboard area to be an advanced industrial production center to enhance the competitiveness of the Thai industrial sector through the establishment of the Eastern Economic Corridor (EEC)

China's announcement of Zero-COVID measures has caused some customers to postpone business expansion plans and delay the start of commercial water intake with the Company, including importing machinery for production. As a result, projects are delayed. However, there are still some customers who are still expanding their business due to the demand of certain types of products both domestically and internationally, such as electronic components, automotive, and food, etc. As a result of these impacts,

the Company's business operations slowed down slightly compared to the Company's original forecast.

The fluctuation of raw material and energy prices from the energy price crisis was another factor that affect the cost of energy such as oil and natural gas. This has affected the cost of electricity generation in the country. In the second half of 2022, the government increased the price of electricity in the industrial sector. At the beginning of 2023, it affected the overall cost of the entire industry and affected the Company's cost which was the main cost of the business.

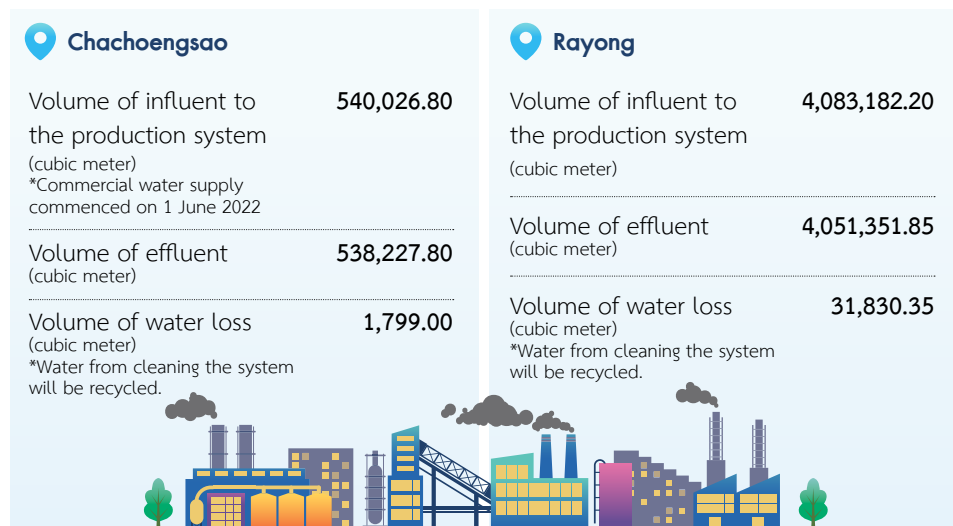
From the economic impact on the industrial sector, the Company has sought ways to work with its suppliers so that they could continue to operate their business together such as modification of agreements and joint action plans, study of technology to reduce the production cost, etc., to support growth during economic volatility.

At present, the Company is committed to providing a comprehensive total water business service to efficiently utilize limited resources; reduce energy consumption, non-revenue water, and administrative cost; and be environmentally friendly, which has been providing services to customers for more than 5 years.

The Company expects that the implementation of this project will add water source to the Eastern Economic Corridor (EEC) which is the main area to drive the economy in the industrial sector of Thailand.

### Industrial Water Business

In 2022, the Company began providing industrial water services in Chachoengsao and Rayong area with the total maximum production capacity of 104,000 cubic meter per day.

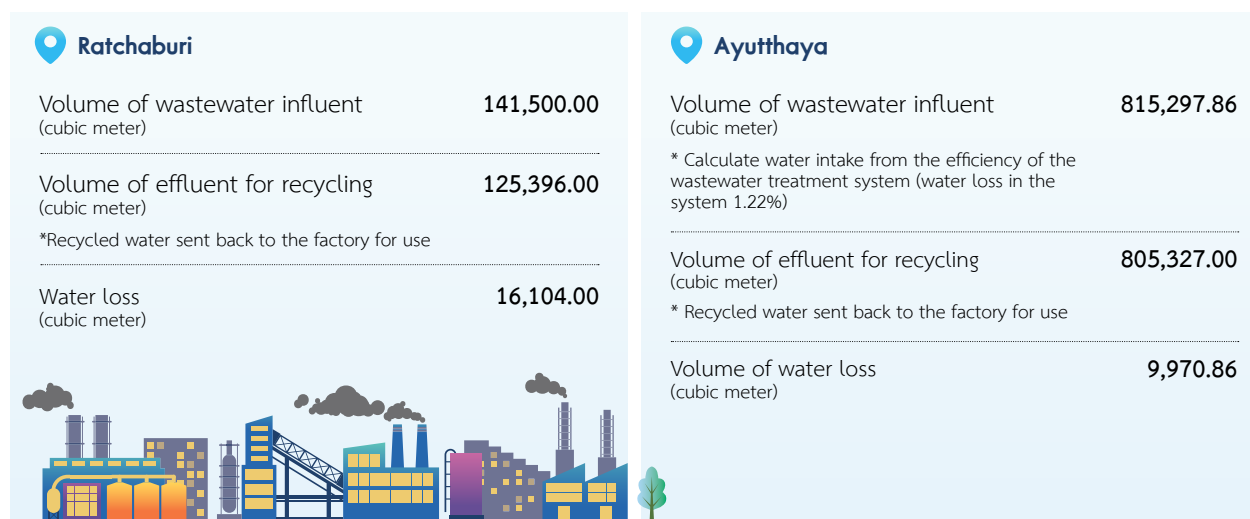


## Wastewater Treatment and Recycled Water Business

(Disclosure 303-2, 303-3, 303-4, 303-5:2018, 306-1)

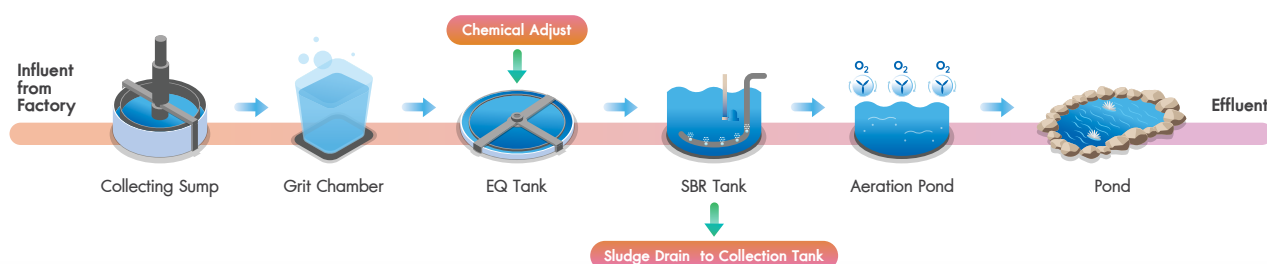
In respect of the wastewater treatment and recycled water business, the East Water Group will choose wastewater treatment and water recycling methods that are suitable for the characteristics of the water entering the system. The treated water quality will be in accordance with the standards stipulated in the contract and the standards for controlling sewerage from industrial and industrial estates according to the notification of the Ministry of Science, Technology, and Environment.

In 2022, the East Water Group operated in 3 areas. In Rayong province, wastewater treatment is carried out by Sequencing Batch Reactor process, with 240,520.00 cubic meters of wastewater entering the system per year. The treated water is stored in the polishing pond, which is not released into the public water sources. In the other 2 areas, treated wastewater is reused in other appropriate industrial activities. Details are as follows:

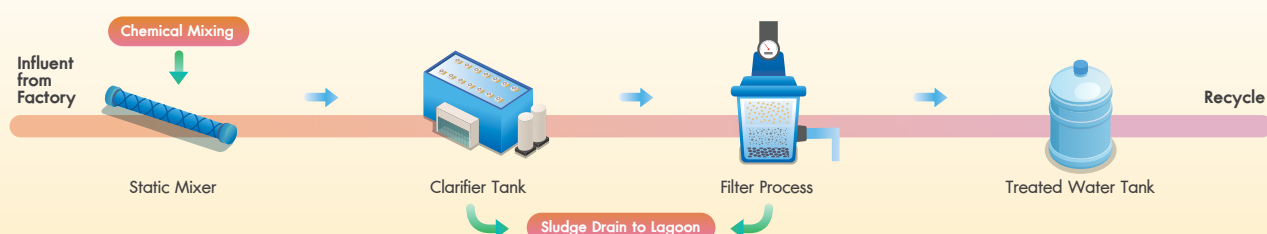


## Wastewater Treatment Process

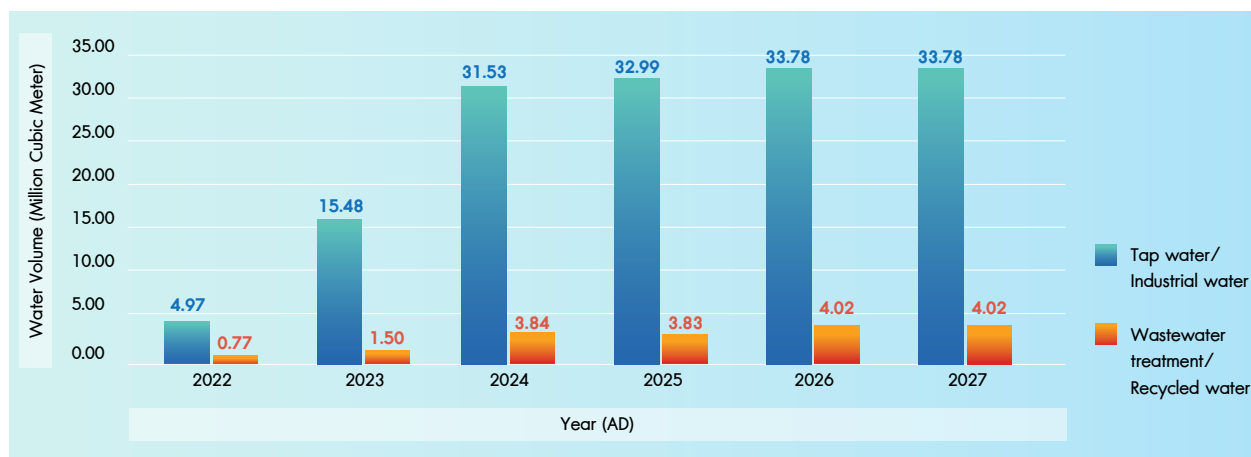
### SBR Treatment System



### Clarified/Sand Filter Treatment System

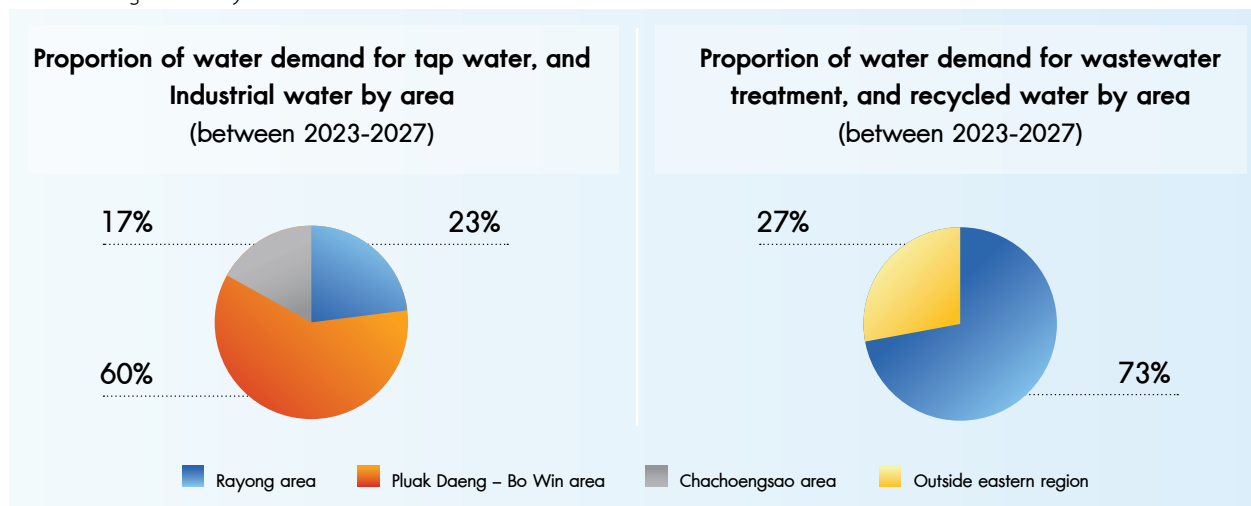


### Projection of Water Demand categorized by service groupz



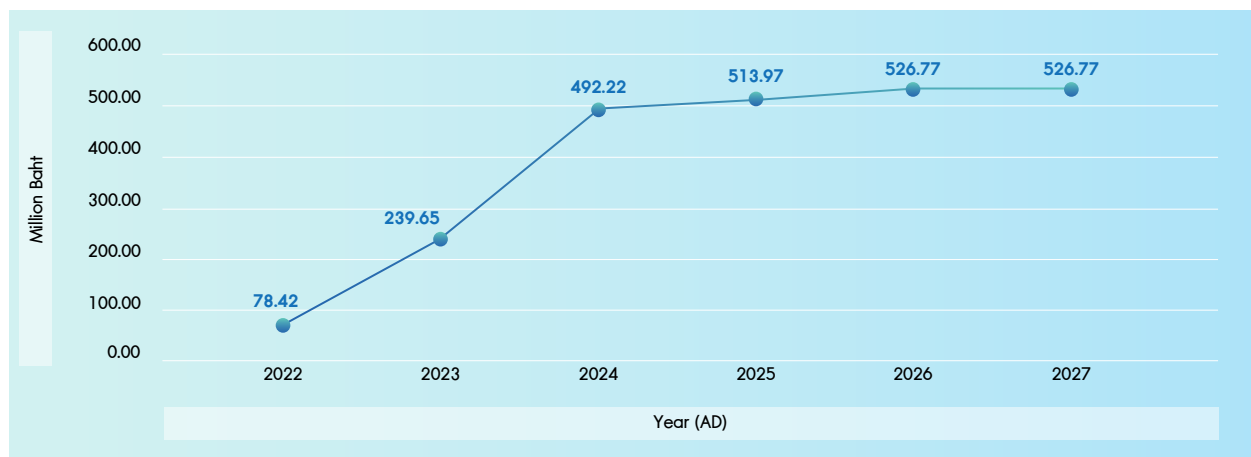
**Remark :** This information is the customer's future water demand projection, which may change according to the customer's investment plan

### Projection of water demand for tap water and industrial water, and volume of wastewater treatment and recycled water categorized by area



**Remark :** This information is the customer's future water demand projection, which may change according to the customer's investment plan

### Projection of income growth from total water solution business



**Remark :** This is a projection of future operating results, which may change according to the customers' water usage plan

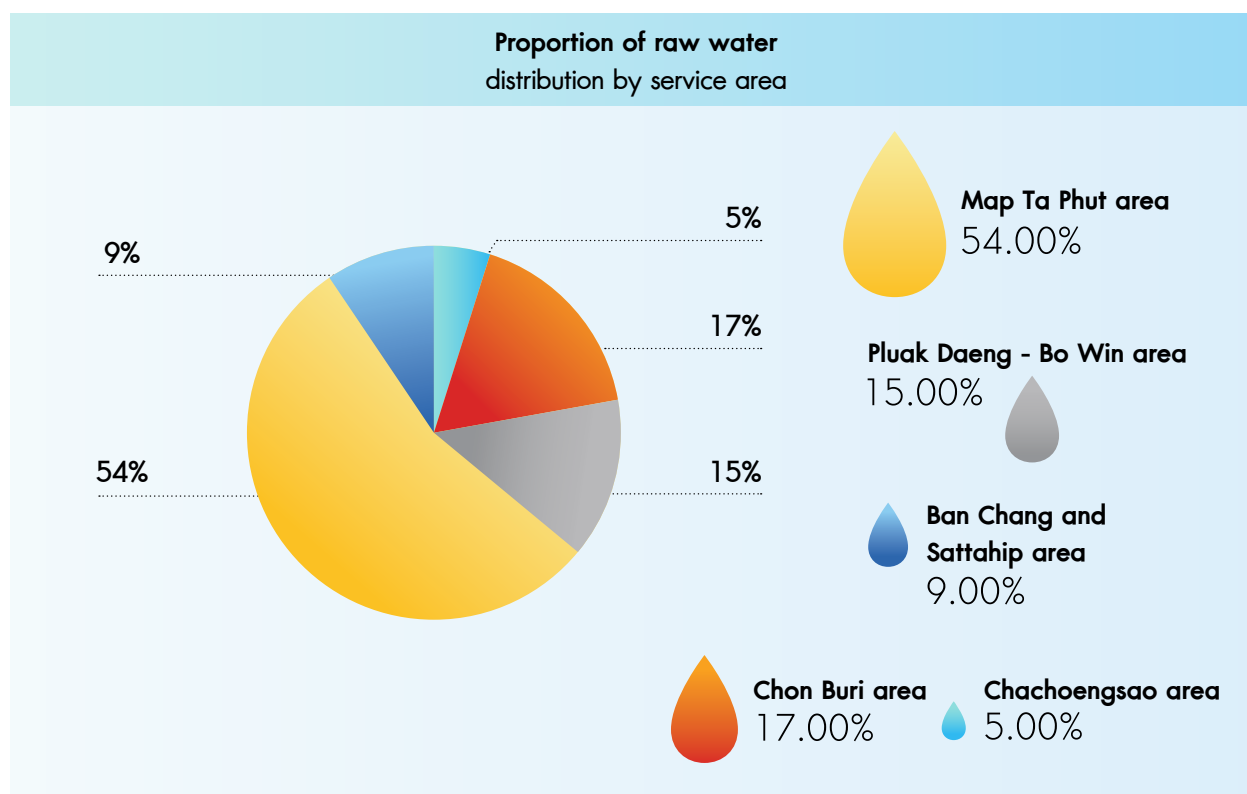
## SERVICE-MINDEDNESS AND PRODUCT QUALITY STANDARDS

### Raw Water Business Segment Service areas, customer groups, and distribution channels of raw water

The Company is the largest entrepreneur engaged in the development of water pipeline system and the distribution and sale of raw water to the water users in the industrial and consumer sectors in the eastern seaboard area. Its strengths include the water grid and pumping systems connecting major water sources in the eastern region that are complete, modern, efficient, and covered 3 eastern seaboard provinces namely Rayong, Chon Buri, and Chachoengsao. Moreover, it is sustainable to deliver water sufficiently to meet the demands of local entrepreneurs at present and in the future.

In 2022, the Company's raw water sales volume amounted to 263.69 million cubic meters, including 0.06 million cubic meters of partial raw water sale in December 2021, totaling of 263.75 million cubic meters. (Based on 2022 raw water usage bill). By considering the proportion of purchase, the overall volume decreased by 11.49% compared to the previous year. The decline in sales was due to the high rainfall in 2022, allowing some water users to store large quantity of rainwater. This included the impact of COVID-19 pandemic on the industrial sector that is still recovering but not the same as original production level, and the tourism sector which despite the trend of rising, is still below pre-pandemic level. Based on the Company's analysis, the direction and trend of raw water service business in the eastern seaboard area in the future still has growth opportunity due to the main factor of industrial expansion in the area. Furthermore, the government has a policy to promote and transform the area in the 3 provinces namely Rayong, Chon Buri, and Chachoengsao to be an advanced industrial hub for Thailand's industrial sector's enhanced competitiveness through an establishment of an Eastern Economic Corridor (EEC). As for its competitiveness, the Company is considered a well-established market player with the wealth of investments, secure water sources, and comprehensive water grid system covering the area as mentioned above.

In 2022, the overall proportion of raw water distribution by service area was as follows:





In running its business, the Company realized the importance of its customers' expectation. In addition to conducting a field survey of customer satisfaction and listening to complaints, the Company also organized customer meetings annually to exchange ideas and opinions which was beneficial for service improvement, and to create understanding and confidence to customer continuously.

In 2022, the Company held meetings with its key customers as follows:

Activity	Target Group	Project Objectives/Details	Outcome Summary
1. Company Visit 2. Festival/ Occasion events 3. Entertain & Lifestyle activities	<ul style="list-style-type: none"> <li>Existing Customers</li> <li>Customers in industrial estate (End Users)</li> </ul>	1. To introduce the Company to water users especially new customers or water users who are interested in visiting the Company to study and have insight in overall picture of Company such as pumping, services, water management, future project investment, and various risk prevention measures.  2. To use cultural occasions to build good relationships to show care and consideration for water users, affecting emotional values and collective actions.  3. To express gratitude through a form of social gatherings according to the priority of water users and to have a festive opportunity to communicate information that was important issues according to the agenda, such as clarifying investments or corporate raw water rate.	1. Welcoming 3 groups of delegates from government agencies  2. Visiting on New Year Festival, Chinese New Year Festival, Songkran Festival, Mid-Autumn Festival.  3. Running activities at Thab Ma raw water pond for SCCG group employees; Walking, running, and tree planting activities of WHA group; 30 Years of East Water activities: returning the green forest and sustainable youth development; "Where do you love East Water? Bring the pen to circle it" activities; "EW Virtual Run" activities; Bowling activities for 2022 among water users with an average overall satisfaction score of 93.40%.

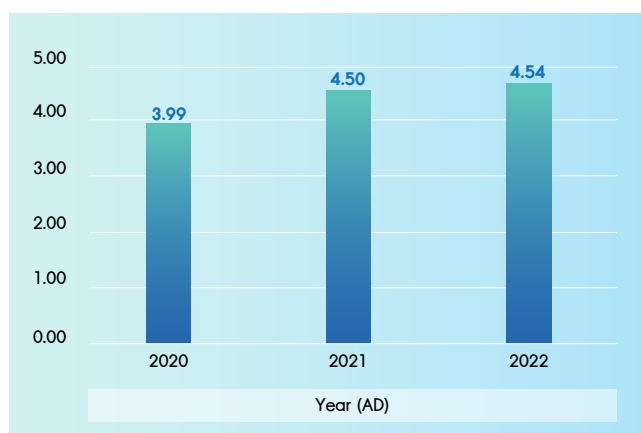


### Customer Satisfaction Management (Disclosure 416-1)

The Company continued to live up to its corporate values of service-mindedness and keeping customer satisfaction scores at required levels through constantly improving customer services and listening to complaints and the voice of customers via various channels including telephones, E-mail, the Company's website, sit visits on important occasions, and annual satisfaction surveys. The Company gathered all the feedback for analysis and consideration at the meetings of the Operation & Customer Service Department as well as the management meetings in order to design plans to continuously improve services to meet specific needs of each customer group.

Expectations and recommendations (2021 customer satisfaction survey)	Performance results for 2022
<ol style="list-style-type: none"> <li>1. Focus on water resource management and quality of service; Future expansion of water pipelines</li> <li>2. Excellent service with service-mindedness; Pricing improvement for enhanced competitiveness</li> <li>3. Relations activities between business entities and customers</li> </ol>	<ol style="list-style-type: none"> <li>1. The Company managed water sources, both main and reserve water sources, to cover water demand of customers, in both normal and extreme cases; including investment project to develop water sources to increase amount of water in the system such as Khlong Luang – Chon Buri raw water pipeline construction project, project to improve efficiency of pipeline from Rayong-Chon Buri area, and Map Ta Phut – Sattahip pipeline construction project to increase capacity of water distribution from Map Ta Phut area to Sattahip area which increase from 29 million cubic meter per year to 79 million cubic meter per year.</li> <li>2. The Company was aware of the impact on water users both in terms of maintaining stability of the distribution to be continual and enough to meet demand, including determination of suitable selling price to reflect cost and not be a burden to users. At present, the raw water tariff the Company determines and collects from users in each sector is the price rate that directly reflects the investment cost of the project to enhance the efficiency of distribution including the cost of pumping management to distribute water to users continually and sufficient for their demand throughout the past period. However, in the past year, the Company considered maintaining the water tariff and postponed the use of water tariff adjustment formula for 2 years to relief the burden and reduce impact on users and entrepreneurs due to the current economic situation where costs have increased with a major cause from war, Russia-Ukraine conflicts, and COVID-19 pandemic. There was improvement of installation model to be expansion of service area to reduce investment burden and maintenance cost of water pipeline system for customers.</li> <li>3. The Company organized relations activities between business entities and customers to continuously build relationship with customers, such as “Where do you love East Water? Bring the pen to circle it” activities; “EW Virtual Run” activities; Running activities at Thab Ma raw water pond for SCCG group employees; Walking, running, and tree planting activities of WHA group; 30 Years of East Water activities: returning the green forest and sustainable youth development; Bowling activities for 2022; Bowling competition activities to build relationships with operational customers, both industrial estate customers and consumer groups.</li> </ol>

### Overall Customer Satisfaction Score: 2020-2022



(For further details regarding the satisfaction level for each topic for 2020-2022, please refer to Annex in page 108)

According to the 2022 customer satisfaction survey, the overall satisfaction level increased by 0.04 point or 0.88% compared to the previous year. It was found that “service provision topic” had the highest average satisfaction, followed by “Water distribution and control room service topic”, from which the topic resulted in the higher score. The Company and related parties are highly aware of maintaining the satisfaction level and focusing on improving the service to increase and maintain the level of satisfaction continuously. In 2023, the Company has a project to increase communication channels through Line OA to increase the ability to communicate with the desired target group more clearly and quickly.

Expectations and recommendations (2022 customer satisfaction survey)	Operational Plan for 2023
<ol style="list-style-type: none"> <li>To improve water quality</li> <li>To update information quicker/ notify information quicker such as details, water management, water quality, water situation.</li> <li>To improve the delayed maintenance time</li> </ol>	<ol style="list-style-type: none"> <li>Currently the Company collects water quality samples from the point of origin before distributing water to respond to users’ expectation. There is an improvement by collecting more water quality samples at points along the pipeline for quality control. If there is a change in water quality, the customer can be notified so that the system can be adjusted in time.</li> <li>Line OA is a project to increase communication channels to build relationships between customers with the goal of increasing the ability to communicate more clearly and quickly with the desired target group.</li> <li>The Company will collect statistical data for pipe repair as well as evaluate and plan repairs to manage time to repair and restore the system without affecting the customers’ water intake.</li> </ol>

### Complaint Preventive Measures (Raw Water) (Disclosure 416-2)

In 2022, the Company received one complaint from customer regarding the decrease in the amount of raw water received without warning. This resulted in the risk of insufficient water production. From this incident, the Company quickly took corrective action and was ready to distribute water normally on the day of the incident. The Company also set up corrective and preventive measures to inform water users as follows:

- In case there is a change in water source, or it is expected that any action will affect the delivery of water, the Company will send a written notice at least 7 days in advance.
- In case of urgent need or emergency that affects water distribution, the Company will notify via SMS or Line OA group.

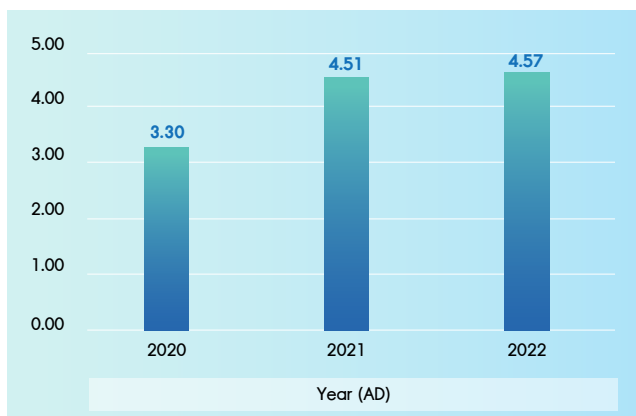
## Total Water Solution Business Segment (Industrial water, wastewater treatment, and recycled water) (Disclosure 416-1)

From the vision of the Company to be the leader in ensuring security of the country's comprehensive water resource management and development through smart technology to continuously support the country's economic growth, the Company has developed from the water source to wastewater management to meet the quality required by law before releasing to natural water sources, including the development of recycled water system to maximize the water use with optimum benefit.

For more than 5 years, the Company has provided services to 7 customers with total water solution service. They are total water solution business segment who trusted the Company to take care of, whether it is receiving of industrial water, wastewater treatment, to recycling water to reuse water in the customers' industrial processes.

According to the 2022 satisfaction survey results, the overall service of total water solution business segment was satisfied with an average score of 4.57 points, an increase of 0.06 % from 2021. Compared to 2020 which was the first year that the Company has officially started the total water solution business with the average score of 3.30 points, it was found that the satisfaction increased by 39.00% as shown in the picture.

### Overall Satisfaction Score for 2020-2022



According to the 2022 satisfaction survey, it was found that customers of total water solution segment were most satisfied with information provided by the Company, whether it was the convenience of contacting the Company through various channels, including the Company's website ([www.eastwater.com](http://www.eastwater.com)), E-mail, telephone, or Line to exchange information and contact for inquiries quickly and easily.

(For further details regarding the satisfaction level for each topic for 2020-2022, please refer to Annex in page 109)

In terms of survey of expectation from total water solution, it was found that 57.14 % of the sample group who assessed satisfaction from the Company's service at "Better than expected" level with 3 areas that received the same score namely service quality for water distribution and control room which the Company has notified the customers in advance when there was abnormality with the total water solution system which might affect customers' water intake; East Water's service staff who provided service with speed and enthusiasm in providing service and helping customers to the best of their abilities; and responding to the customers' demand with the view that East Water paid attention and placed importance on customers' demand.

Expectations and recommendations (2022 customer satisfaction survey)	Operational Plan for 2023
<ol style="list-style-type: none"> <li>To organize activities to strengthen relationships to get more familiar with each other.</li> <li>To meet and discuss future available services</li> <li>To increase industrial water service</li> <li>To improve overall response to customers' demand.</li> </ol>	<ol style="list-style-type: none"> <li>To increase activities to strengthen relationships among total water solution segment such as to have a meeting to discuss and follow up joint operational issues continuously in order to develop processes and provide total water solution to respond to the demand of each customer group thoroughly with customized service.</li> <li>To jointly create operational process for long-term sustainability.</li> </ol>

### Tap Water Business Segment (Disclosure 416-1)

The subsidiaries designed tap water production system appropriate to different locations. Designs and construction plans were based on levels of water demand and raw water quality so as to choose appropriate tap water production systems and ensure that tap water products met specific quality standards as follows:

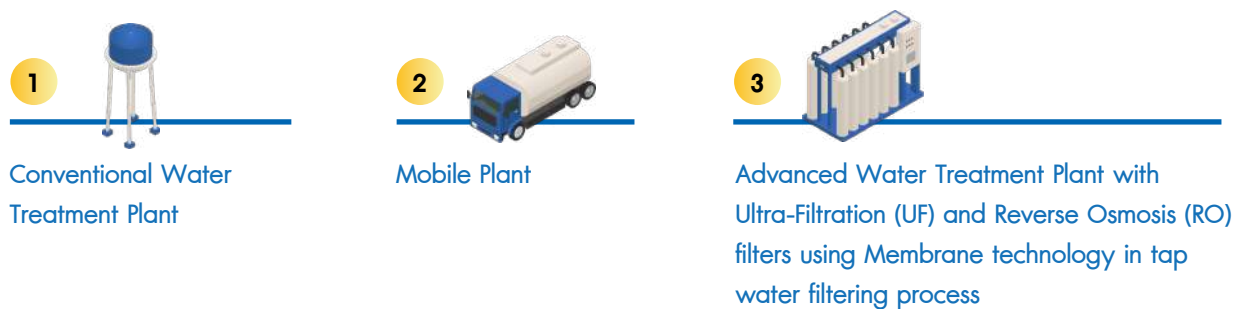
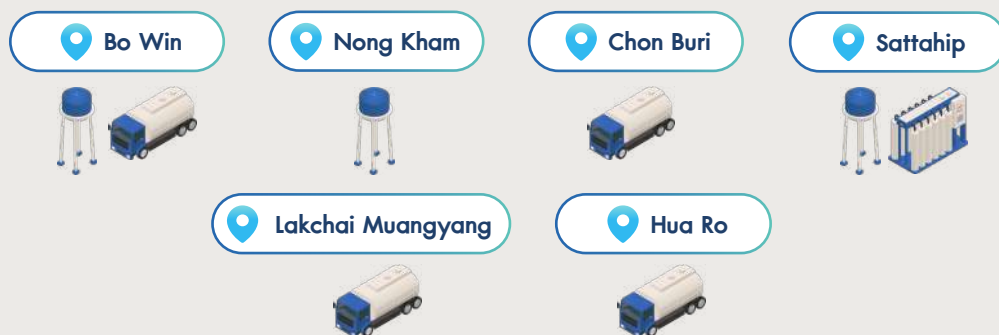


Table: Summary of Tap Water Production System in Waterworks entities

#### Water Quality Control of Thai Industrial Standards (TIS)



#### Provincial Waterworks Authority Water Quality Standard

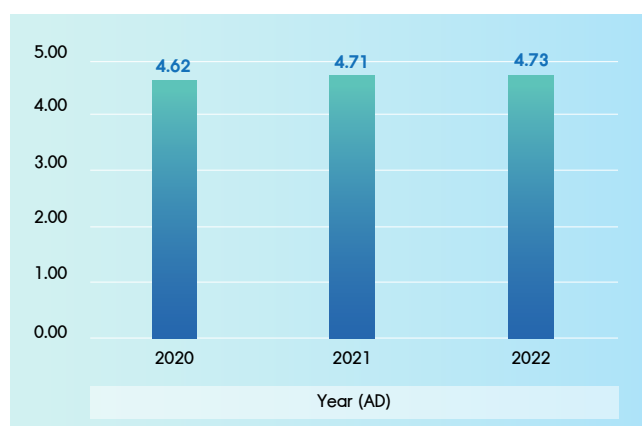


According to the annual tap water user satisfaction survey, another issue that captured attention of the tap water users was the quality of tap water, especially in terms of cleanliness, clarity, and sedimentation. This was because turbidity and clarity of tap water were physical characteristics easily observed by the water users. Therefore, the subsidiaries adopted a management approach to handle risks of substandard water quality which was divided into 2 parts as follows:

- **Production System** – The employee controlling the production system would monitor turbidity value of raw water consistently and use an automated chemical dispenser device. In the case of a high turbidity value of raw water due to a high-water season or a dry season where a turbidity value the exceed a standard level that could be handled by the production system, the controller would decrease the production capacity such that the turbidity value met the specified quality criteria.
- **Water Distribution Pipeline System** – To maintain consistent quality of water in the pipeline according to standard requirements, the Company planned removing sediments according to scheduled times or upon detection of a high value of turbidity probably caused by pipeline repair works or sediments deposited inside the pipeline. Also, the Company developed an automated water release system by installing as many sediment release points as possible in the water distribution pipeline system in order to better control turbidity values of tap water in the pipeline.

As quality of services was one of the top priorities of the subsidiaries, a third-party agency was hired to conduct customer satisfaction surveys with tap water users on an annual basis. The opinion and recommendations gathered from the tap water users were used as guidelines for further improvement of the quality of services in all aspects to achieve greater efficiency.

### Overall Satisfaction Score for 2020-2022



According to the 2022 customer satisfaction survey, the satisfaction level went up compared to that of 2021. The average satisfaction level of the past 3 years was 4.69. The subsidiaries realized the importance of maintaining the satisfaction level and were committed to constantly improving data provision services

(Please refer to the details of the satisfaction level for each aspect for 2020-2022 in Annex in page 109)

### Complaint Preventive Measures (Tap Water) (Disclosure 416-2)

In 2022, the complaint handling for tap water business segment has been improved and provided services to tap water users in total of 20,246 transactions where all of them have been completely resolved according to the UU Service Level Agreement (UU SLA) to ensure customers' maximum satisfaction.

Complaints about broken pipes and pipe leaks have been several times. The road construction resulted in drilling in the area along the water pipeline. The subsidiaries have assigned the operating area to coordinate with the supervisor and contractor to notify the water pipe line to reduce the impact from the road expansion construction, and regularly coordinate with the construction foreman in the area near the water distribution pipeline.



## ENVIRONMENTAL DIMENSION

Operational targets of Eastern Water Resources Development and Management Public Company Limited only, not include UU PCL.

### Targets for 2022

#### Water aspect

**Non-Revenue Water (NRW)**  
control: % NRW

**less than 2.50**

#### Energy aspect



**Reduce raw water cost**

by more than 2.00% compared to 2021 budget

**Other aspects** (General waste, hazardous waste, air pollution, natural resource)



Comply with regulations, rules and environmental laws related to business operation

**Control emissions**

in various fields to meet the standards



### Cultivate awareness, separate waste before disposal

Be a part in reducing greenhouse gases every day.

Eliminate the main causes of global warming, separate waste properly

## Performance results for 2022

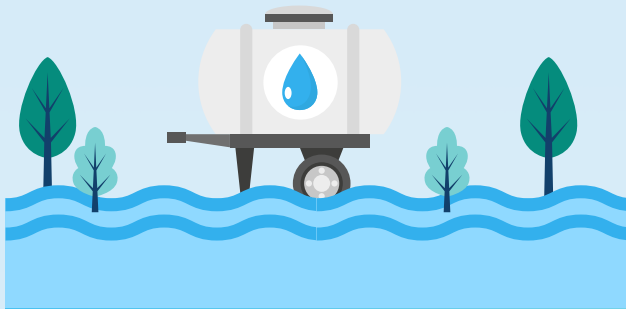
### Water aspect

NRW Control:  
%NRW  
equals **1.69**



### Energy aspect

Electrical energy  
per unit of pumped water was  
**0.41** kWh/m<sup>3</sup>,  
8.82% decrease from 2021



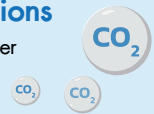
### Other aspects (General waste, hazardous waste, air pollution, natural resource)



Amount of recycled waste  
in East Water building was  
**6,833.50** kg,  
representing 19.01% of total waste.

### Amount of carbon dioxide emissions

from the total energy consumption of pumped water  
per unit of pumped water  
was **206.02** tonCO<sub>2</sub>eq/million cubic meters,  
8.58% decrease from 2021



### Increased in green area



**5** (calculating  
green area of  
400 trees/Rai)  
Rai per year

and help absorb carbon dioxide about

**238–396** tons/year  
(One tree can absorb carbon dioxide on  
average 9-15 kg/year)

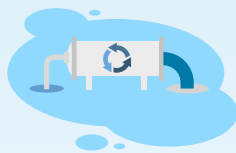


## Targets for 2023

### Water aspect

NRW Control  
Reduce %NRW to be  
**less than 2.50**

Amount of recycled water  
inside East Water Building  
at **10.00%**

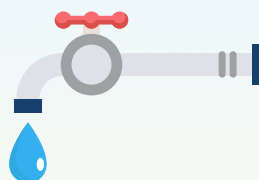


of the total amount of the Company's central water consumption  
(In 2022, the amount of recycled water inside East Water  
Building was 868 cubic meters, representing 5.35 % of the  
amount of the Company's central water consumption.

### Energy aspect

Reduce the amount of  
electrical energy

per unit of pumped water, compared to  
the past 3-year average (Average base  
of 2020-2022 was 0.45 kWh/m<sup>3</sup>)



### General waste, hazardous waste

Amount of recycled waste at  
East Water Building at **10.00%**  
of total waste

### Other aspects (Air pollution, natural resource)

### Reduce amount of carbon dioxide emissions

from total energy of pumped water per unit of pumped water,  
compared to the past 3-year average (Average base of 2020-2022  
was 224.42 tonCO<sub>2</sub>eq/million cubic meters)



Comply with regulations, rules  
and environmental laws related  
to business operation

Control emissions in various fields to meet  
the **standards**



## CLIMATE CHANGE RESPONSE TOWARDS INTEGRATED WATER MANAGEMENT (Disclosure 201-2, 303-1:2018 )

In 2022, the Company had a number of measures to respond to climate change through ensuring the stability of its water grid system to build confidence in water management and provide sufficient water supplies to all sectors.

### Creation of Stability of Water Grid System

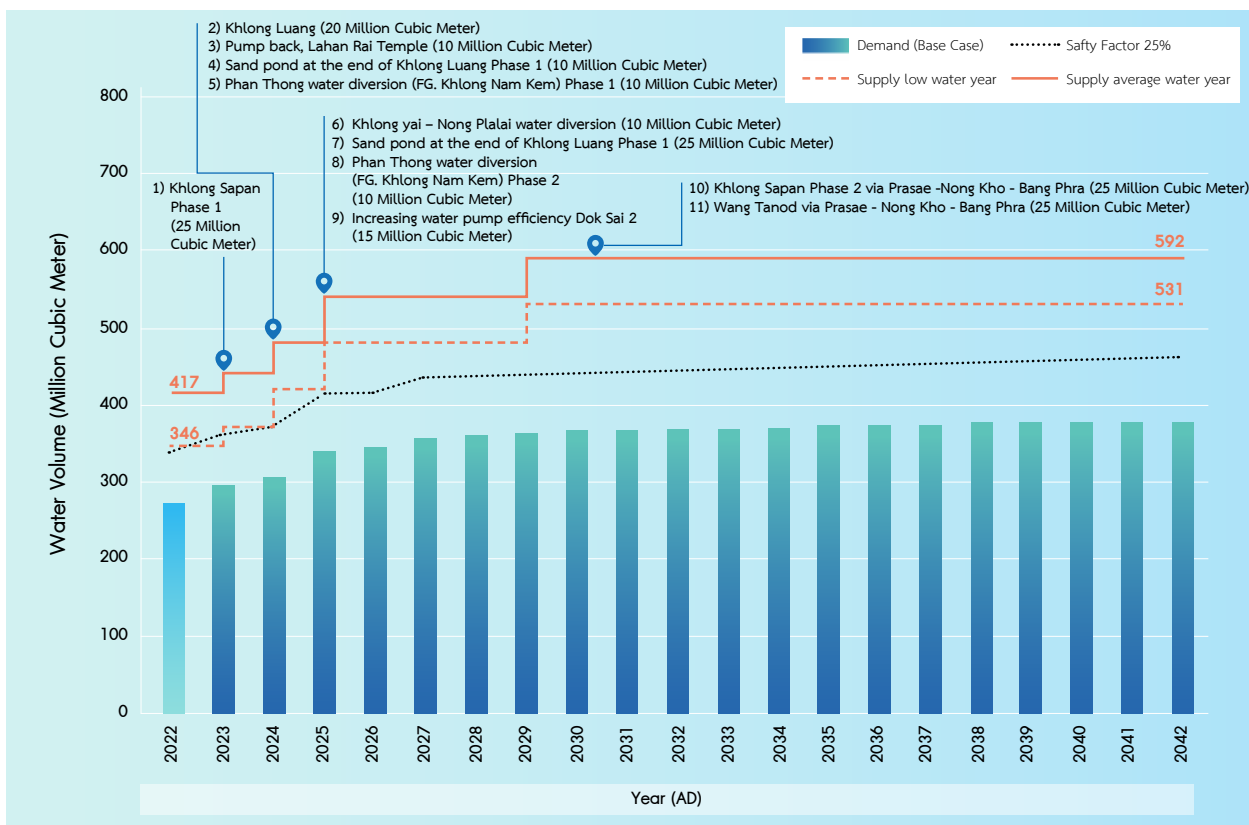
In creating stability of its water grid to ensure sufficient water supplies in the long run, the Company has invested in development of additional water grid of 139.08 kilometers namely Khlong Luang – Chon Buri water pipeline, Nong Plalai – Nong Kho – Laem Chabang water pipeline, and Map Ta Phut – Sattahip water pipeline to build confidence to water users both in consumer sector and industrial sector in the eastern region to be sufficient to an increase water demand in the future, based on monitoring of levels of rainfall, water flows into reservoirs, water volume in reservoirs, and weather forecast including atmospheric pressure values, effects of wind directions in the Pacific Ocean on El Niño and La Niña, and precipitation levels (Using International Research Institute for Climate and Society (IRI) model)

New climate database covering 1991-2021 was used to analyze the locations for the Company's water distribution services, customers' water usage need projections, and the capability of the pipeline and the pumping and distribution system. The Company considered a 20-year plan to create the stability of its water grid so as to address the risk of droughts in the eastern region. The plan consisted of the following 3 parts.

- Raising the capability of water supply sources
- Developing the raw water pipeline network system (Water Grid)
- Collaboration with relevant agencies and producing weather forecasts

**I. Raising the capability of water supply sources:** The Company established short-, medium-, and long-term development plans for its water supply sources to ensure the stability of its raw water sources and build customers confidence in the next 20 years. Adjustments were made to the previous year's water source development plans to keep up with the current situation and to ensure that water users would not be affected. Details of the plans are as shown below.

**Diagram: Water supply source development plans and water demand forecasts over the next 20 years**



## II. Developing the raw water pipeline network system

**(Water Grid):** The Company continuously enhanced the capability of its water grid. In 2022, the Company's achieved the progress of its operations as follows:

### (1) Construction of the Khlong Luang Reservoir – Chon Buri Raw Water Pipeline

To accommodate the water demand in Chon Buri and Pluak Daeng – Bo Win areas and to address possible water shortages in the future. The pipeline has the transmission capacity of around 52 million cubic meters per year. In 2021, permission to use the area for the construction of water pipeline along Road 331 was completed, remaining in the Royal Irrigation Department area which is under consideration of the Treasury Department. Currently, the pipeline is under construction and is expected to be completed in 2023.

### (2) Improvement of the efficiency of the water pipeline system from Rayong – Chon Buri area

To raise capability of water distribution system from Rayong area to Chon Buri area, which has combined the work of the project to improve the efficiency of the water pipeline system from Rayong – Chon Buri area and the project to expand the water distribution area of private companies in this project. The water distribution capacity has been increased from original pumping capacity of 78 million cubic meters per year to 206 million cubic meters to accommodate water

demand in Chon Buri area and Pluak Daeng – Bo Win area in the future. Currently, the construction is underway and expected to be completed in 2023.

### (3) Construction of Map Ta Phut – Sattahip water pipeline system

To increase water distribution capacity from the Map Ta Phut area to Sattahip area by increasing the water distribution from the original average pumping capacity of 29 million cubic meters per year to 79 million cubic meters. This was to accommodate water demand of current customers. The project also included the expansion of production capacity of Sattahip Waterworks and new customers in the future in Sattahip area. Currently it is under construction and expected to be completed in 2023.

**III. Collaboration and weather forecast:** To ensure that the Company's water management plan was appropriate and in line with the current situation, the Company collaborate closely with relevant agencies such as the Royal Irrigation Department, Provincial Waterworks Authority, Industrial Estate Authority of Thailand, Working Group of the Eastern Water Operation Center (Keyman Water War Room), Office of the National Water Resource (ONWR), Water and Environment Institute for Sustainability, Office of the Eastern Special Development Zone, Meteorological Department, Department of Royal Rainmaking and Agricultural Aviation, etc.

## Joint Water Management Overall Water Risk



Low (0-2) Low-Medium (1-2) Medium-High (2-3) High (3-4) Extremely High (4-5)

Source: Overall Water risk : [www.wri.org/our-work/project/aqueduct/](http://www.wri.org/our-work/project/aqueduct/)

The water sources under the Company's management are surface water pumped from various sources which can be divided into 2 types according to usage: main and reserve water sources, details as follows:

Main water source refers to water sources allocated by the Royal Irrigation Department including Nong Kho, Dok Krai, Nong Plalai, Prasae, and Bang Phra reservoirs. This includes other sources of water that can be pumped out for use each year where the water supply comes from seasonal runoff water at sources like the Bang Pakong and Rayong rivers, Khlong Thab Ma and private water sources.

Reserve water source refers to water sources that provide backup support for the main water sources. The water must be reserved beforehand for use when there are low water levels in the main sources or water shortage. These are Samnakbok, Chachoengsao, and Thab Ma raw water ponds.

**Table: Volumes of water from main water sources used by the Company in 2022**

(Disclosure 303-3:2018, 303-5:2018)

Surface Water	Allocated water (per written permit) 10 <sup>3</sup> million liters	Pumped water For 2022 10 <sup>3</sup> million liters	Total soluble solid (≤ 1,000 mg/liter) 10 <sup>3</sup> million liters	Total soluble solid (> 1,000 mg/liter) 10 <sup>3</sup> million liters
1. Prasae Reservoir	110.00	11.94	11.94	0
2. Nong Plalai Reservoir*	120.00	141.73	141.73	0
3. Dok Krai Reservoir	116.00	82.78	82.78	0
4. Bang Phra Reservoir	8.00	7.30	7.30	0
5. Nong Kho Reservoir	16.70	6.93	6.93	0
6. Bang Pakong River (Water Stress)	50.00	7.29	7.29	0
7. Khlong Thab Ma, Rayong River	0	9.29	9.29	0
8. Private Water Sources (Water Stress)	12.00	8.21	8.21	0
9. Rainwater from Samnak Bok Pond (Water Stress)	0	0.23	0.23	0
<b>Total</b>	<b>432.70</b>	<b>275.70</b>	<b>275.70</b>	<b>0</b>

**Remark :**

\* The volume of water pumped from the Nong Plalai Reservoir exceeded the permitted limit since it was the management of the amount of overall water allowed in Rayong area, i.e. the total water used of Dok Krai Reservoir and Nong Plalai Reservoir does not exceed 236 million cubic meters/year (10<sup>3</sup> million liters = million cubic meters)

(Further details of the table showing volumes of water from main water sources used by the Company in 2021-2022 are in the Annex in page 110)

The water sources allocated by the Royal Irrigation Department (RID) from November through October of the following year. Each year, the RID through relevant projects would inform the non-agricultural water users (consumer and industrial sectors) about the permitted water quotas for that year. The allocated amounts were based on the water levels in the reservoirs at the beginning of the dry season (November), the minimum water levels stored, the plans to supply water to the agricultural sector, and the amounts of water released to maintain the ecosystem. During each water allocation year, volumes of water consumption would be monitored to allocate water quotas that matched the levels of water flow into the reservoir within the limits in the written permits for water uses from water sources.

In 2022, the Company pumped water from the Bang Pakong River according to criteria in the MOU between the Company and the water users dated 3 September 2021. The requirement was that the water flow in the Bang Pakong River at the Khlong Kuen pump station must be in the same direction for three consecutive days. On the following day, the Company must invite a working group to verify the water flow before the start of the pumping. The pumping shall be halted when water salinity in the Bang Pakong River at the Chachoengsao Irrigation Office exceeded 1g/liter. During the past year, the Company pumped water from July 2022 to December 2022 for distribution mainly to consumer and industrial sectors in Chachoengsao with part of it being diverted to the Bang Phra reservoir Samnak Bok reserved pond as reserved supply for water users in Chachoengsao and Chon Buri area in the dry season 2023.

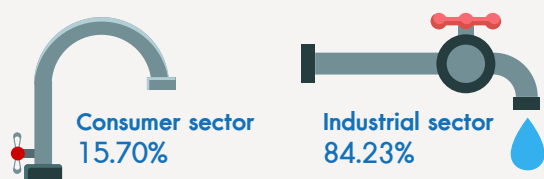
## Water Management in 2022

Although at the beginning of the year the amount of water in the reservoirs in Chon Buri and Rayong area was normal, the Company still accelerated the pumping and diversion of water from Nong Plalai reservoir in Rayong province to Chon Buri province and kept reserves of water deposits in the Chon Buri area. This was to reduce the risk of water management during the drought and to increase stability of water pumping and distribution in Chon Buri area by pumping water from the Bang Pakong River to deposit to the full capacity of the Bang Phra reservoir.

In conclusion, the total water volume pumped by the Company for water management in 2022 was at 275.70 million cubic meters, a decrease of 11.35% from 2021. This was due to the large amount of water situation causing customers who had their own water source to choose to use their own water source as the main source. In addition, some of the factory customers in the industrial estates were still affected by COVID-19 pandemic, causing them unable to fully increase production capacity.

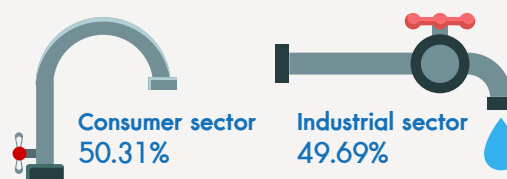
## Overall Water Consumption by Service Area

### Maptaphut, Ban Chang, and Sattahip



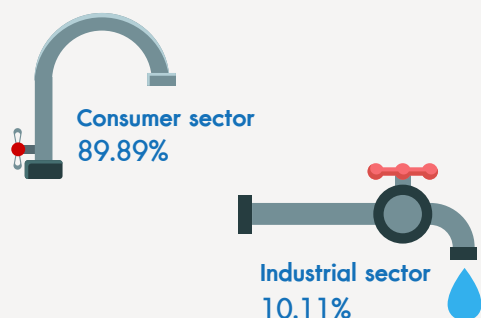
Most customers in these areas were in the industrial sector and represented more than 84.23%, while customers in the consumer sector represented 15.70%. The water came from the three major reservoirs in Rayong i.e., Dok Krai, Nong Plalai, and Prasae, and the Company's reserved water source i.e., Thab Ma raw water pond.

### Chon Buri and Pluak Daeng – Bo Win



Most customers in these areas were consumer sector and represented more than 50.31%, while customers in the industrial sector represented 49.69%. These areas were the country's new strategic line. However, according to the geographical condition, there were only two large water reservoirs, i.e., Nong Kho and Bang Phra, leading to the need to the raw water pumped and diverted from the Nong Plalai and Prasae reservoirs in Rayong through the Company's water grid.

### Chachoengsao



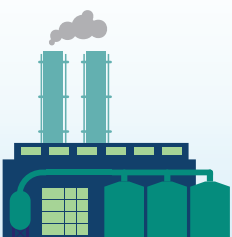



Most customer in the area were the consumer sector and represented more than 89.89%, while customers in the industrial sector represented 10.11%, with the Bang Pakong River as the main source of water. However, as Chachoengsao faced saltwater intrusion, some areas suffered from freshwater shortages in the dry season. To ensure year-round water supply, raw water must be purchased from private water sources in the dry season, while in the rainy season, water must be pumped from the Bang Pakong river and kept in the Bang Phra reservoir for use in the dry season.



## Tap Water Consumption at the Company

The East Water Group placed importance on the use of water within its operating areas, whether it is an office building, a water pumping station, and staff residence through campaigns to encourage employees to use water sparingly and appreciate its value. In 2022, the East Water Group's tap water usage averaged 1,681.42 cubic meters per month. The main sources of water were from the Metropolitan Waterworks Authority (MWA) and the Provincial Waterworks Authority (PWA). Details of water consumption by geographical location are as follows:

	<b>East Water Building<sup>1</sup></b>			
	Water Supplier: MWA			
	Average Water Usage Amount (cubic meter/month)	Total Water Usage Amount (cubic meter) (Disclosure 303-3:2018)	Effluent Amount (cubic meter) <sup>5</sup> (Disclosure 303-4:2018)	Water Usage Amount (cubic meter) (Disclosure 303-5:2018)
	1,351.25	16,215.00	12,972.00	3,243.00
	<b>Operation Office<sup>2</sup></b>			
	Water Supplier: PWA			
	Average Water Usage Amount (cubic meter/month)	Total Water Usage Amount (cubic meter) (Disclosure 303-3:2018)	Effluent Amount (cubic meter) <sup>5</sup> (Disclosure 303-4:2018)	Water Usage Amount (cubic meter) (Disclosure 303-5:2018)
	33.08	397.00	317.60	79.40
	<b>23 Water Pump Station<sup>3</sup></b>			
	Water Supplier: PWA			
	Average Water Usage Amount (cubic meter/month)	Total Water Usage Amount (cubic meter) (Disclosure 303-3:2018)	Effluent Amount (cubic meter) <sup>5</sup> (Disclosure 303-4:2018)	Water Usage Amount (cubic meter) (Disclosure 303-5:2018)
	271.92	3,263.00	2,610.40	652.60
	<b>Staff Residence<sup>4</sup></b>			
	Water Supplier: PWA			
	Average Water Usage Amount (cubic meter/month)	Total Water Usage Amount (cubic meter) (Disclosure 303-3:2018)	Effluent Amount (cubic meter) <sup>5</sup> (Disclosure 303-4:2018)	Water Usage Amount (cubic meter) (Disclosure 303-5:2018)
	25.17	302.00	241.60	60.40
<b>Total</b>	Average Water Usage Amount (cubic meter/month)	Total Water Usage Amount (cubic meter) (Disclosure 303-3:2018)	Effluent Amount (cubic meter) <sup>5</sup> (Disclosure 303-4:2018)	Water Usage Amount (cubic meter) (Disclosure 303-5:2018)
	1,681.42	20,177.00	16,141.60	4,035.40

### Remarks :

<sup>1</sup> Refers to water usage in the Head Office (18<sup>th</sup> and 22<sup>nd</sup>-26<sup>th</sup> floor) and all common area of 16,215.00 cubic meters. In addition, East Water Building has used recycled water from the building wastewater treatment in the volume of 868.00 cubic meters.

<sup>2</sup> Refers to the water usage at Rayong Operations Center, Laem Chabang Office, and Thab Ma Office. The water meter at Chachoengsao Office was shared with Chachoengsao Head Tank and other offices in the area.

<sup>3</sup> Refers to water usage at the nine pump stations supplied by PWA. The Company produced tap water at the eight pump stations by using raw water considered as NRW. These pump stations were Nong Kho Station, Prasae Station 2, Nong Plalai Station 1-3, Nong Plalai Pressure Boosting Station, Hub Bon Water Storage Station, and Bang Pakong Station. The remaining 6 stations did not have tap water supply.

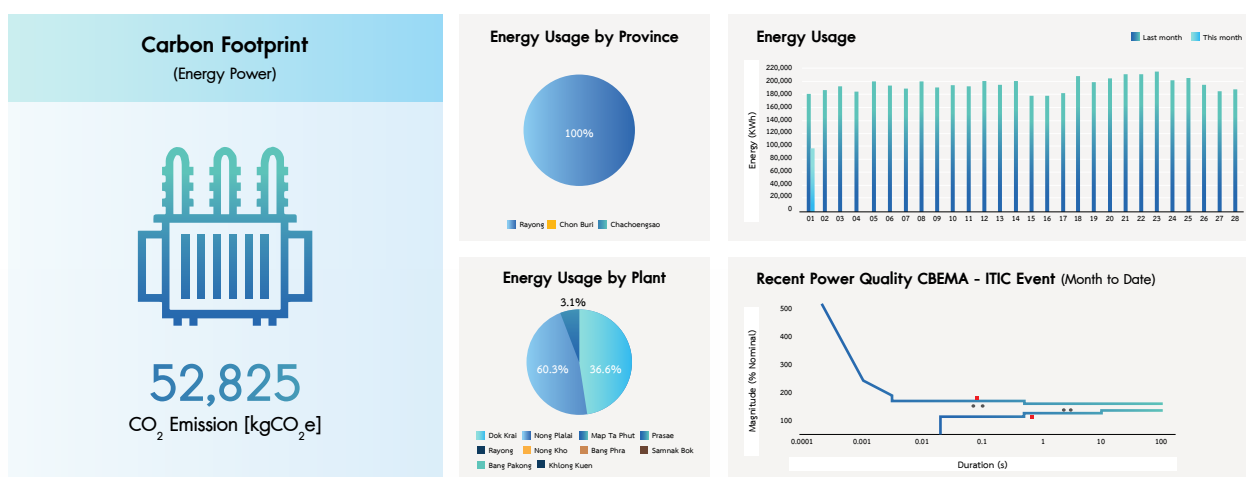
<sup>4</sup> Refers to water usage at Executive Residence at Rayong Operations Center and Staff Residence at Thab Ma Raw Water Pond. The residence at Chachoengsao Head Tank shared the water meter with Chachoengsao Head Tank. For other residences, the Company produced tap water by using raw water considered as NRW.

<sup>5</sup> The amount of wastewater discharged from houses and buildings will be approximately 80.00% (reference from the manual of community wastewater and wastewater treatment system, Pollution Control Department, Ministry of Science, Technology and Environment)

## WATER PUMPING AND DISTRIBUTION MANAGEMENT EFFICIENCY ENHANCEMENT (SMART WATER) PROJECT

At present, the SMART WATER project has implementations in various areas which can be summarized as follows:

1. Software for controlling pressure in pipes; software for pump and water source control (AQUIS) for simulating hydraulics, calculating Pressure Optimization, Flow Optimization, and Reservoir Optimization offline which can calculate the pressure, flow rate and pump usage in the existing pipe system.
2. Electrical efficiency tracking system and power quality meter (Power Monitoring Expert - PME) which can show power consumption, power quality in individual pump in each pumping station and display information of each power station.



3. Asset Management System (AMS) for water pumping system with a database created in the system and develop process (Inventory) along with Mobile Application System for opening and closing various repair cases.
4. The Command Control Center (CCC) which has developed preliminary visualization and is prepared to link the system. It is still in the development stage and waiting for basic information to be completed.

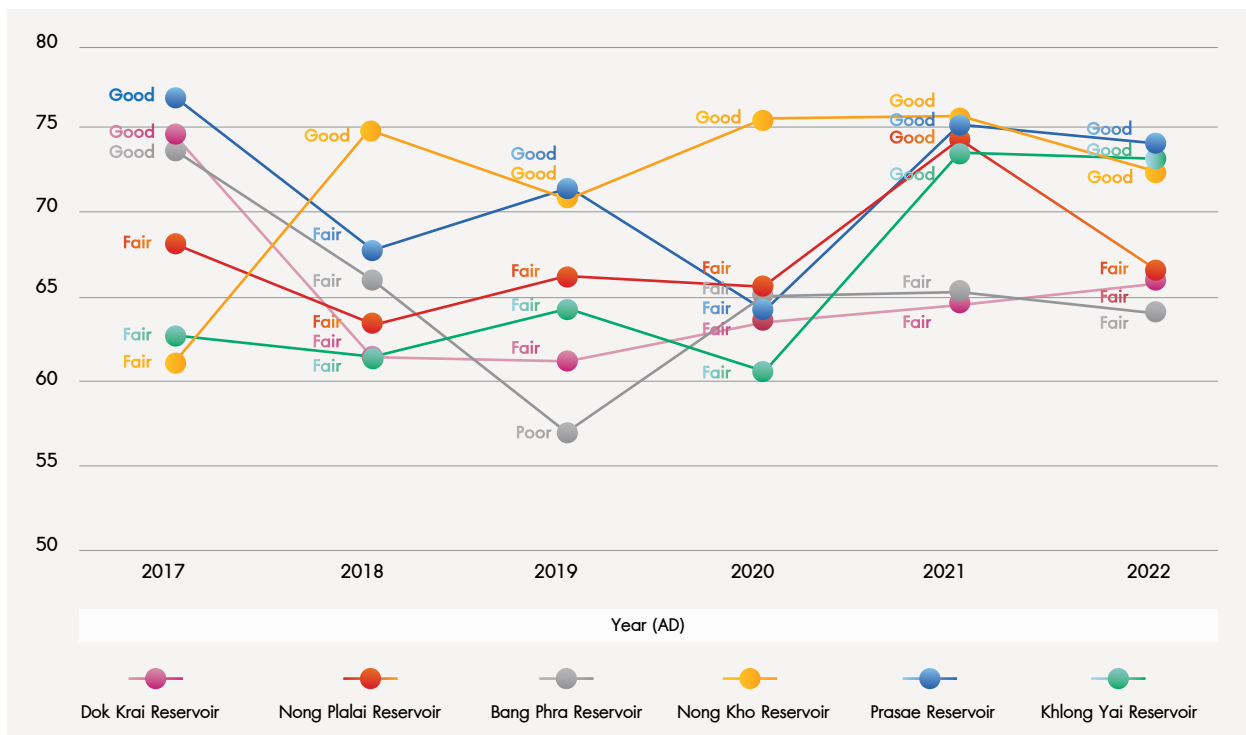
## CARE FOR WATER QUALITY IN WATER SOURCES

(Disclosure 303-1:2018)

The Company operates business related to water resources; hence, it places importance on the efficient use of water resources and consider the quality of water in various water sources, which is the heart of the quality of the Company's products and services. The Company also focuses on the potential impact on the livelihoods of living creatures in that water source from pumping and delivering water through the Company's raw water pipeline. The Company therefore follows up and monitors to ensure that its business operations will not affect the environment. The Company compares the results of water quality testing in various water sources with raw water quality data for the past 6 years in order to monitor the trend of changes in water quality in various water sources.

Based on the monitoring and follow-up on the water quality, it was found that the Pollution Control Department's Water Quality Index (WQI) of the majority of the reservoirs was on average at fair to good rating as follows

### Water Quality Index of main reservoirs



The Company has 2 types of water quality monitoring processes as follows:

1. Water quality monitoring by external agencies: 13 major and reserve water sources of the Company were monitored. The physical and chemical properties of the water were measured monthly. The results were further analyzed to identify trends, causes, and factors concerned. Relevant reports were produced and submitted to relevant agencies and the customers through the Customer Relations Division.
2. Water quality monitoring through online tools at 20 spots: Water quality changes were monitored by the Company using the Supervisory Control and Data Acquisition (SCADA) system. Reports of the water quality results were sent to the customers once per day.

In addition to water quality monitoring in water sources, the Company has coordinated with customers to monitor water quality from the source and the destination sent to each customer to increase service efficiency and speed in improving water quality for customers. Customer can prepare to improve water quality before entering the production system.

## ENVIRONMENTAL PROJECTS

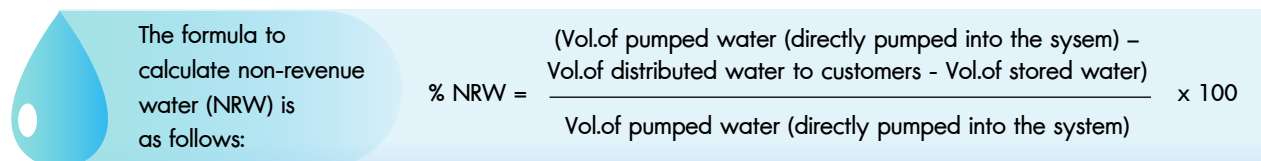
(Disclosure 302-3, 305-2)

### Non-Revenue Water Control

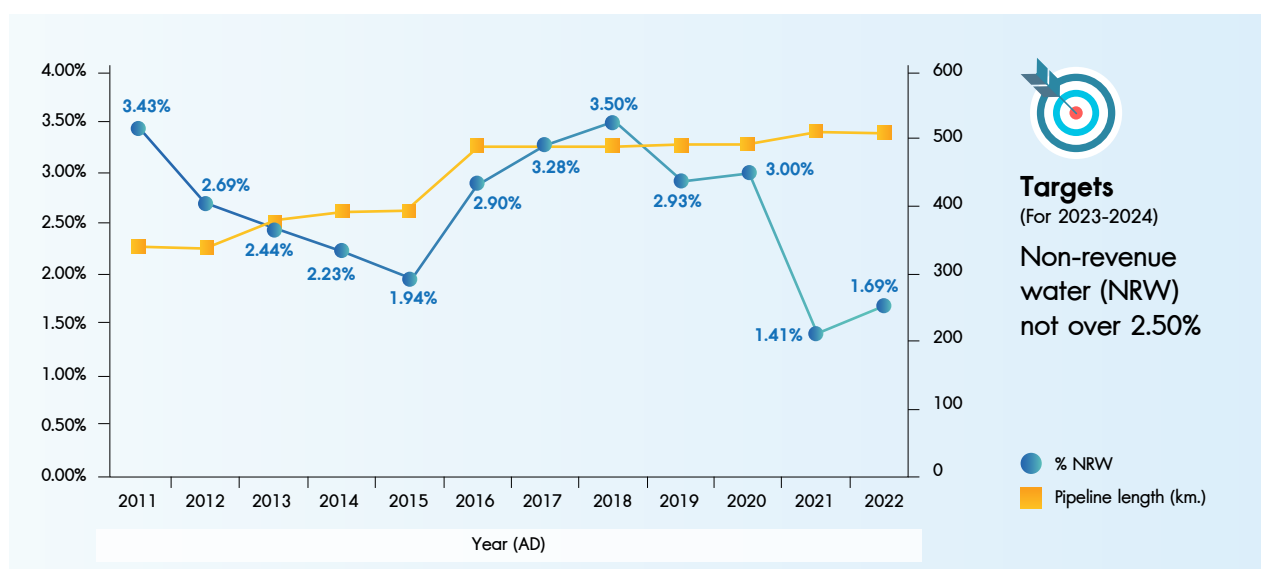
The rapidly changing world climate has caused people to pay more attention to sustainable development. Water is another resource that is crucial to the sustainable development of global community. Such sustainability involves ensuring that there are sufficient resources for present and future generations. Therefore, the United Nations has announced a global action plan for the years 2018-2028 called “Water for Sustainable Development”, with a combination of water resources management to achieve economical, social, and environmental objectives. But the water shortage problem is increasing day by day and the water supply is not enough for the consumer, agricultural, and industrial sectors. One of the major obstacles to water sustainability is non-revenue water management.

Non-revenue water (NRW) is water that does not generate income in the system, causing losses both from energy consumption from pumping and water resources during pumping before reaching the customers. The Company as the leader in the country’s comprehensive water resource management, especially management and development of water resources in the eastern region which is industrial center and Eastern Economic Corridor (EEC), has realized and always seen importance of this point. This can be seen from the approach to formulate policy for non-revenue water control to be at 2.50% of the pumped water for direct distribution into the system. Not only studying and evaluating the capability of water management, but the Company also focuses on studying new and modern technologies that are suitable for the Company’s pumping system.

In 2022, the Company has developed a package software for controlling pressure in the pipe which can calculate pressure value, flow rate, and pump usage in the existing pipeline system, which enables the Company to control non-revenue water in the pipeline to be at 1.69% of the amount of the water pumped for direct distribution into the system. (Higher than 2021 due to the Company developing additional water grid to accommodate water demand of customers in operating area.)



### Non Revenue Water



**Table: Volume of pumped water in 2022**

Month	Volume of pumped water (directly pumped into the system) (10 <sup>3</sup> Liters)	Volume of distributed water to customers (10 <sup>3</sup> Liters)	Volume of stored water (10 <sup>3</sup> Liters)	Volume of non-revenue water (10 <sup>3</sup> Liters)	% NRW (of the water directly pumped to the system)
January	25,820,124	25,539,852	0	280,272	1.09%
February	23,357,748	22,478,343	62,596	816,809	3.50%
March	26,651,193	25,237,589	937,666	475,938	1.79%
April	24,808,467	24,270,644	0	537,823	2.17%
May	24,687,276	24,173,219	78,618	435,439	1.76%
June	23,627,192	23,666,527	0	-39,335	-0.17%
July	23,158,402	22,850,688	26,689	281,025	1.21%
August	24,865,569	20,974,705	3,395,960	494,904	1.99%
September	23,271,272	18,387,874	4,478,013	405,385	1.74%
October	23,348,982	18,840,894	4,237,752	270,336	1.16%
November	21,478,844	18,042,159	3,138,229	298,456	1.39%
December	19,790,753	19,229,872	0	560,881	2.83%
<b>Total</b>	<b>284,865,822</b>	<b>263,692,366</b>	<b>16,355,523</b>	<b>*4,817,933</b>	<b>1.69%</b>

**Remark :**

\* Non-revenue water = Volume of water (directly pumped into the system) – volume of water distributed to the customers – volume of stored water



## Electricity Consumption and Energy Conservation Measures

(Disclosure 302-1, 302-2, 305-2)

Electricity is a key driver of the water pumping and distribution system. It is also a main cost of the Company. Electricity consumption is directly correlated with the volume of water pumped through the Company's Water Grid of 523 km. covering 20 pump stations and 66 power sub-stations and metering stations. Hence, the Company is committed to ensuring the reliability of its pumping and distribution system by setting a goal of no disruptions to the water distribution from the main water grid. Nevertheless, according to the Company's requirements, there is an eight-hour interval for stopping the water distribution for maintenance purposes. However, for machines or equipment with critical duties (Class A), there is no time interval for stopping the operations.



### 20 pump stations

- Khlong Kuen Reserve Pond Pump Station
- Bang Pakong Pump Station
- Samnak Bok Pump Station
- Bang Phra Pump Station
- Maptaphut Pump Station
- Nong Plalai Pump Station 2
- Prasae Pump Station
- Thab Ma Reserve Pond Pump Station
- Khlong Thab Ma Pump Station
- Chachoengsao Pump Station
- Bang Pakong Low Pressure Pump Station
- Samnak Bok Pressure Boosting Station
- Nong Kho Pump Station
- Dok Krai Pump Station
- Nong Plalai Pump Station 1
- Nong Plalai Pump Station 3
- Nong Plalai Pressure Boosting Station
- Thab Ma Low Pressure Pump Station
- Rayong River Pump Station



Realizing the importance of efficient energy consumption, the Company continued to implement energy conservation projects for its water pumping and distribution system and office buildings to save energy and improve energy consumption efficiency organization-wide through the Energy Management Working Group. This not only helped manage costs and expenses for the organization, but also served to reduce the “global warming” problem. The energy conservation efforts covered the following operating sites.

1. 13 pump stations registered as controlled factories:  
Nong Plalai Pump Station (1-3), Dok Krai Pump Station, Nong Plalai Pressure Boosting Station, Bang Pakong Pump Station, Chachoengsao Pump Station, Bang Phra Pump Station, Maptaphut Pump Station, Samnak Bok Pressure Boosting Station, Prasae Pumping Station, Nong Kho Pump Station, Thab Ma Pump Station, Khlong Thab Ma Pump Station, and Rayong Pump Station.
2. One controlled building:  
The building refers to the head office. In this regard, each year's energy conservation target will be set up based on previous year's energy conservation performance evaluation results. The new target shall be further reduction in the energy consumption at organizational, production or service, and device levels. The factors to be considered shall include levels of energy loss realized and improvement possibilities.
3. 66 power sub-stations.
4. Tap water production station of subsidiaries of 11 entities.

## Summary of Operations of Energy Consumption Efficiency Enhancement Projects in 2022

(Disclosure 302-4, 305-2, 305-5)

### Electricity-Saving Measures for 2022

Premises	Projects	Before Improvement (kWh/y)	After Improvement (kWh/y)	Electricity saving (kWh/y)
Head Office	1. Installing Variable Speed Drive (VSD) at a 350 TR water cooler	499,619.78	381,607.86	118,011.92
	2. Adjusting the temperature (Set Point) of the water cooler to be suitable for use	381,607.86	370,159.62	11,448.24
	3. Reducing the variable speed drive (VSD) of the CHP cold water pump from 50 Hz down to 46 Hz.	74,544.10	35,469.30	39,074.80
	<b>Total</b>	<b>955,771.74</b>	<b>787,236.78</b>	<b>168,534.96</b>
 <b>CO<sub>2</sub> emissions (kg-CO<sub>2</sub> eq)</b>		<b>477,790.29</b>	<b>393,539.67</b>	<b>Reduction in CO<sub>2</sub> emissions</b> <b>84,250.62 kg-CO<sub>2</sub> eq</b>
<b>Operating sites</b> Nong Plalai Pressure Boosting Station, Dok Krai Pump Station, Nong Plalai Pump Stations (1-3), Chachoengsao Pump Station, Bang Pakong Pump Station, Prasae Pump Station, Nong Kho Pump Station, Thab Ma Pump Station, Khlong Thab Ma Pump Station, and Rayong River Pump Station. Three stations exempted from energy saving measures required by law were Bang Phra Pump Station, Samnak Bok Pressure Boosting Station, and Maptaphut Pump Station.	1. Maintenance of air-conditioners	1,112,335.11	1,078,965.06	33,370.05
	<b>Total</b>	<b>1,112,335.11</b>	<b>1,078,965.06</b>	<b>33,370.05</b>
 <b>CO<sub>2</sub> emissions (kg-CO<sub>2</sub> eq)</b>		<b>556,056.32</b>	<b>539,374.63</b>	<b>Reduction in CO<sub>2</sub> emissions</b> <b>16,681.69 kg-CO<sub>2</sub> eq</b>

Based on energy-saving measures in 2022, all of the facilities achieved a total reduction in CO<sub>2</sub> emissions 100.93 tons.

The calculation was based on Emission factor = 0.4999 kg-CO<sub>2</sub>eq/kWh by the Thailand Greenhouse Gas Management Organization (TGO)'s Emission Factors. [http://thaicarbonlabel.tgo.or.th/admin/uploadfiles/emission/ts\\_578cd2cb78.pdf](http://thaicarbonlabel.tgo.or.th/admin/uploadfiles/emission/ts_578cd2cb78.pdf)

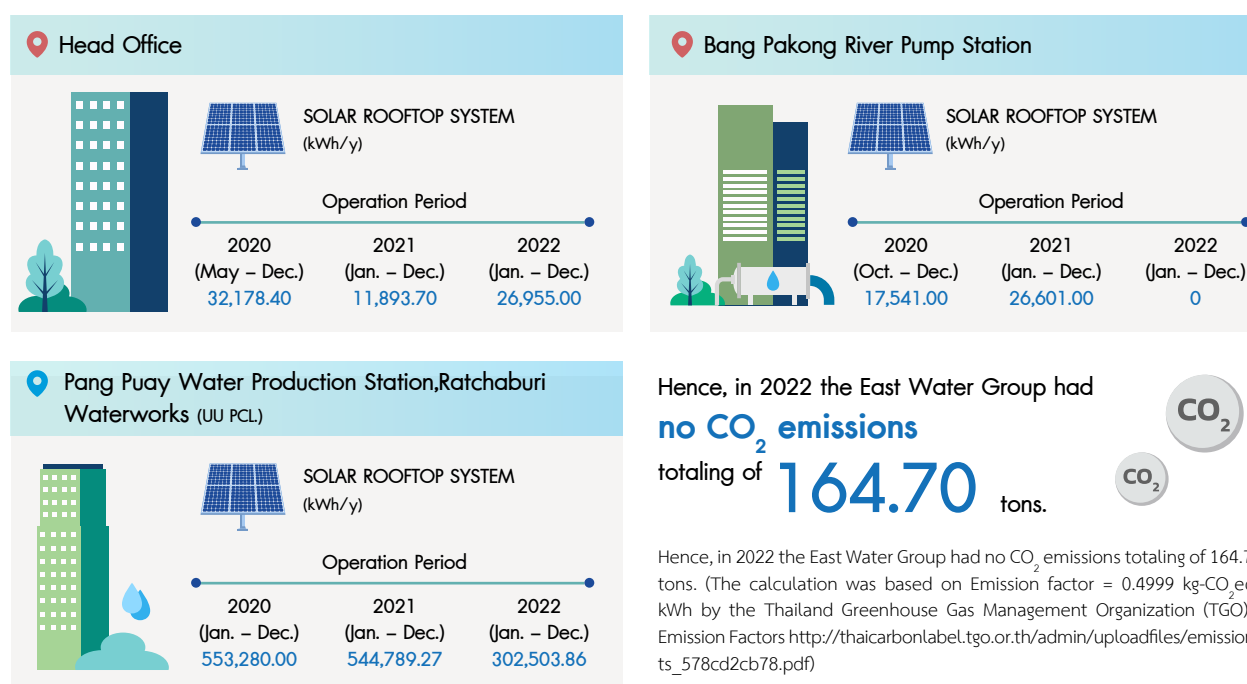


As for subsidiaries, energy-saving measures have been implemented in 11 areas. (Head Office, Bang Pakong Water Supply, Chachoengsao Water Supply, Nakhonsawan Water Supply, Egcom Tara, Rayong Waterworks, Sattahip Waterworks, Bo Win Waterworks, Hua Ro Waterworks, Chonburi Waterworks, and Nong Kham Waterworks) for 5 projects enabled energy-saving of 2,043,879.62 kWh/y, and can reduce CO<sub>2</sub> emissions of 1,021,735.42 kg-CO<sub>2</sub>eq or 1,021.74 tons.

(The calculation was based on Emission factor = 0.4999 kg-CO<sub>2</sub>eq/kWh by the Thailand Greenhouse Gas Management Organization (TGO)'s Emission Factors [http://thaicarbonlabel.tgo.or.th/admin/uploadfiles/emission/ts\\_578cd2cb78.pdf](http://thaicarbonlabel.tgo.or.th/admin/uploadfiles/emission/ts_578cd2cb78.pdf))

## Measures of Solar Energy as an Alternative to Electricity for 2020-2022

The East Water Group has used solar energy to replace electrical energy for the operations in the head office areas, Bang Pakong River Pump Station, and Pang Puay Water Production Station, Ratchaburi Waterworks as follows:

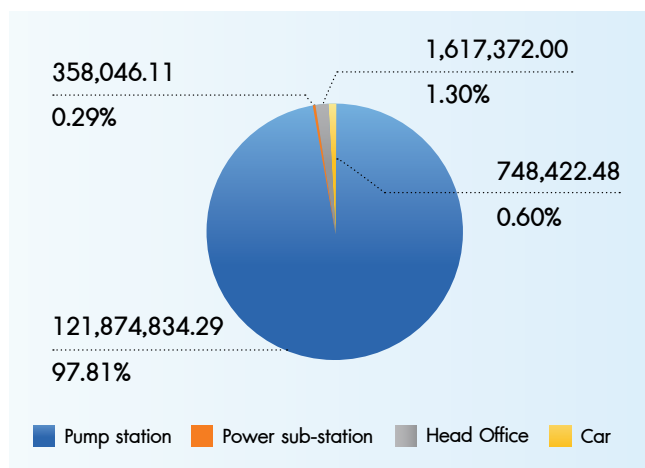


The Company has continuously formulated an energy conservation and innovation development plan in 2023 as follows:

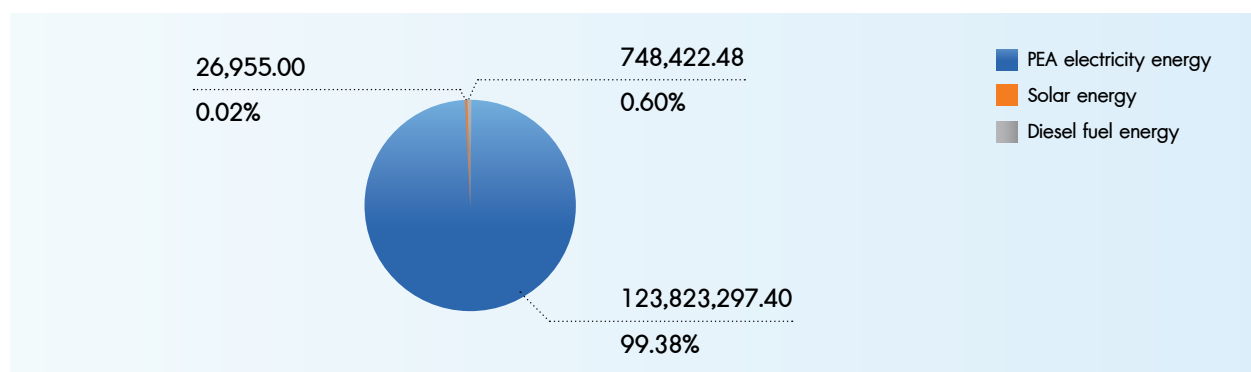
1. Installing Variable Speed Drive (VSD) water coolers, size 175 TR and 350 TR, 9<sup>th</sup> floor, East Water Building.
2. Maintenance of water coolers 1-4 by cleaning the Condenser.
3. Maintenance of Split Type air-conditioners.

The goal is to reduce energy consumption by 3.00% per year.

## The Company's Energy Consumption in 2022 (kWh)

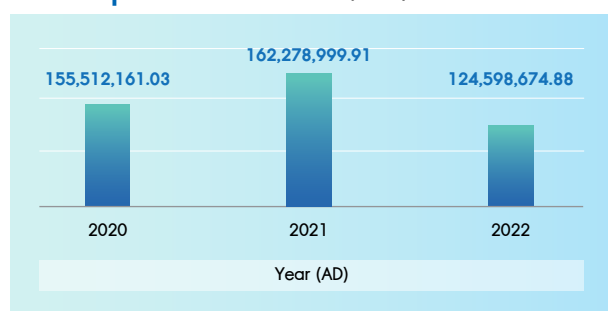


### The Company's Energy Consumption Proportions in 2022 (kWh)

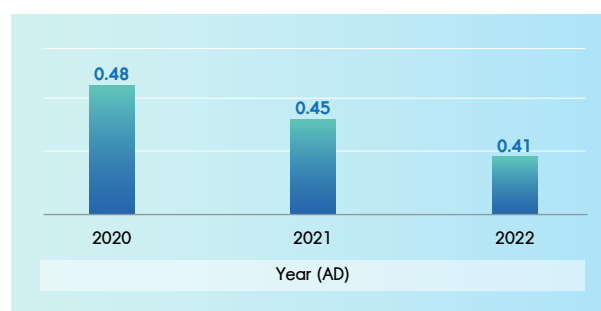


In summary, the Company's electricity and fuel consumption in 2022 from 3 main sources i.e. electricity, diesel fuel, and solar energy accounted for 124,598,674.88 kWh. The calculation was based on 1) electricity consumption in pump station 121,874,834.29 kWh (In 2022, there was no fossil energy consumption) 2) East Water Building Head Office 1,617,372.00 kWh 3) Sub-stations along the pipeline 358,046.11 kWh, and 4) Company's car 74,186.88 liters, equivalent to 2,950,412.26 mega Joules or 748,422.48 kWh. The Company's electricity and fuel consumption decreased from 2021 of 37,680,325.03 kWh or a decrease of 23.22 % of energy consumption 2021. This was due to the large amount of rainfall in 2022 causing customers who had their own water source to choose to use their own water source as the main source, compared to 2021. But when compared to energy consumption in pumping and delivering water per unit of water, the energy consumption was 0.41 kWh/cubic meter. The energy consumption per unit of water is approximately 8.82% less than 2021 due to the Company's pumping operations more efficiently including energy saving measures. (Disclosure 302-3, 302-5)

### The Company's Electricity and Fuel Consumption 2020-2022 (kWh)



### Electricity used per total water pumped (kWh/cubic meter)



**Remark :** This was calculated from the energy consumed at pump stations compared to entire system water pumped.

### Table: The Company's greenhouse gas emissions

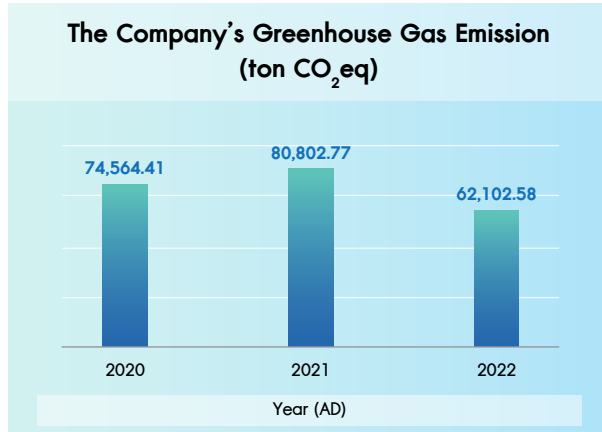
(Disclosure 305-1, 305-2, 305-3)

Amount of greenhouse gas emission	2020	2021	2022
Amount of direct greenhouse gas emission scope 1 (ton-CO <sub>2</sub> eq)	857.20	350.39	203.32
Amount of indirect greenhouse gas emission scope 2 (ton-CO <sub>2</sub> eq)	73,707.20	80,452.38	61,899.27
Amount of indirect greenhouse gas emission scope 3 (ton-CO <sub>2</sub> eq)	*The Company has not yet collected any information		

**Remark :** \* The Company plans to assess significant indirect greenhouse gas emission in scope 3 and collect data for sustainability report 2023.

## Comparison chart of the Company's greenhouse gas emissions 2020-2022

(Excluding the reduction in emissions from solar energy)



**Remark :** In 2021-2022, the Company used car's fuel energy to additionally calculate greenhouse gas emissions.

**\*\*Formula for calculating GHG emissions**

= Activity Data (kWh) X Emission Factor

**Electricity Emission Factor**

= 0.4999 kg - CO<sub>2</sub>eq/kWh

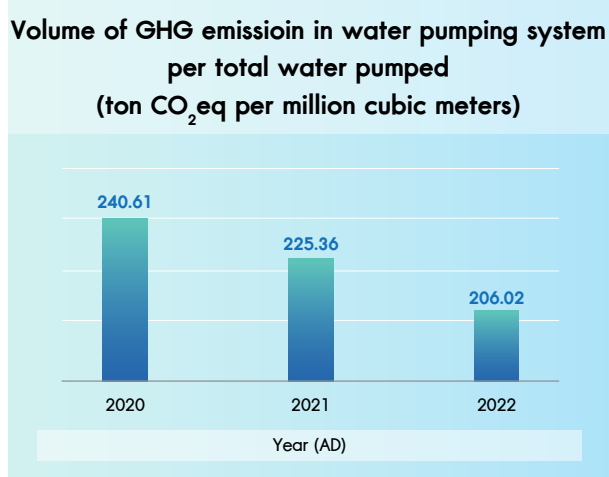
**Diesel Fuel Emission Factor**

= 2.7406 kg - CO<sub>2</sub>eq/liter

This calculation was based on Thailand Greenhouse Gas Management Organization (TGO)'s Emission Factor ([www.tgo.or.th](http://www.tgo.or.th))

## Comparison chart of the Company's greenhouse gas emission per volume of water pumped in the entire system for 2020-2022

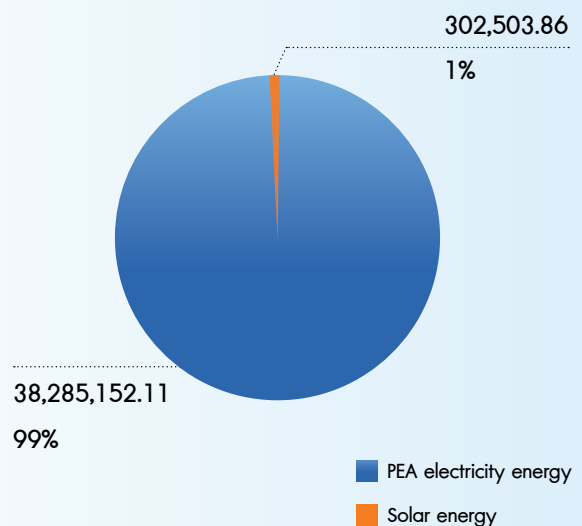
(Disclosure 305-4)



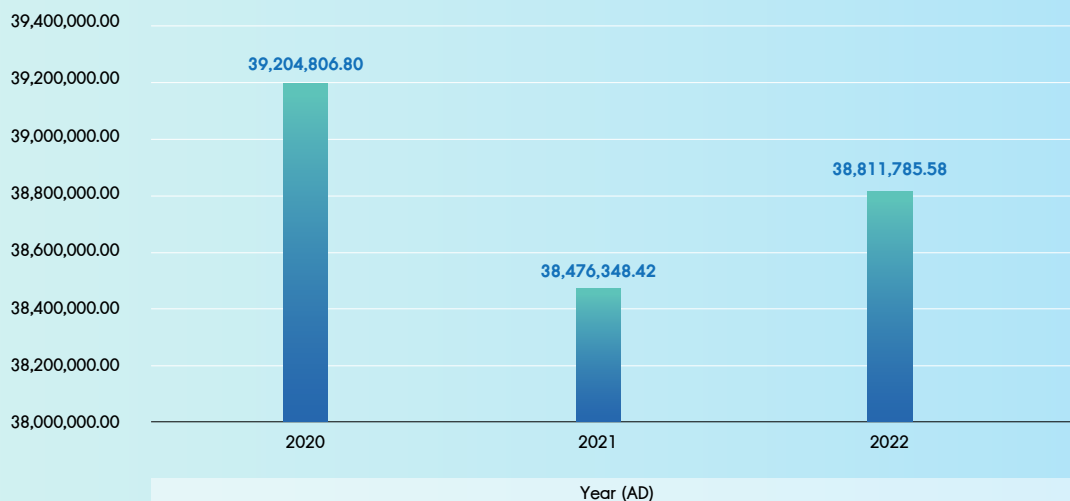
Volume of GHG emissions in the water pumping system per total water pumped average 3 years (2020-2022) equals 224.42 tonCO<sub>2</sub>eq per million cubic meters.

In 2022, the subsidiaries consumed energy from 2 sources namely electricity and solar energy accounted for 38,857,655.97 kWh, an increase of 11,307.55 kWh from 2021 or 0.29% of energy consumed in 2021. This was due to the overall improvement of the pressure management to be more efficient to maintain consistent pressure level in the pipeline by installing additional water pumps in parallel with the management to increase the capacity of the water supply pump.

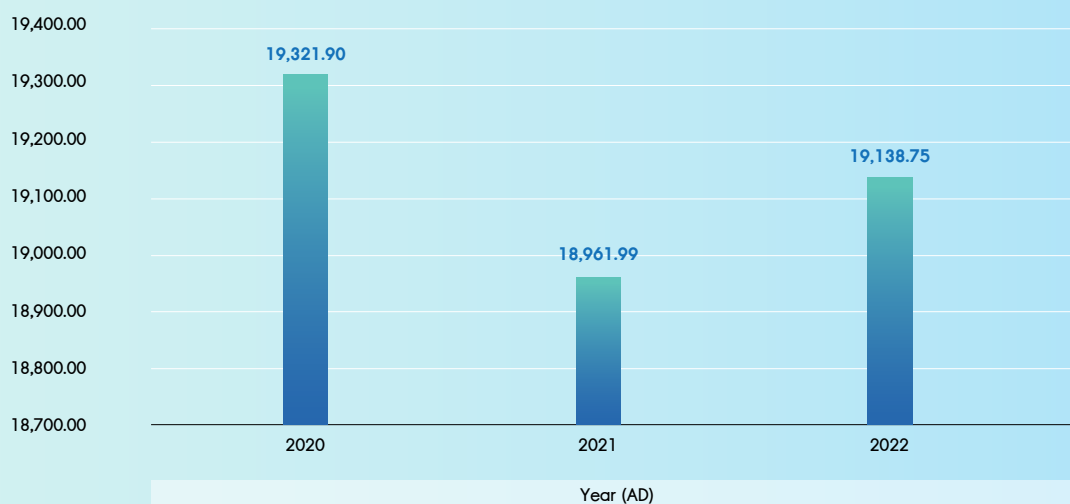
## The Subsidiaries' Energy Consumption Proportions in 2022 (kWh)



The Subsidiaries' Energy Consumption 2020-2022 (kWh)



In 2022, the subsidiaries consumed solar energy, as an alternative to electricity, of 302,503.86 kWh, hence the reduction in CO<sub>2</sub> emissions of 151.22 tons. The Subsidiaries' electricity power consumption equivalent to the release of CO<sub>2</sub> of 19,138.75 tons, hence the increase in CO<sub>2</sub> emissions of 0.93% from 2021.

The Company's GHG Emissions (ton CO<sub>2</sub>eq)

\*\*The formula for calculating GHG emissions

= Activity Data (kWh) X Emission Factor

Electricity Emission Factor

= 0.4999 kg - CO<sub>2</sub>eq/kWh

This calculation was based on Thailand Greenhouse Gas Management Organization (TGO)'s Emission Factor ([www.tgo.or.th](http://www.tgo.or.th))

## Waste Management

(Disclosure 306-2, 306-3, 306-4, 306-5)

In 2022, the Company joined the “Vibhavadi Zero Waste” project hosted by the Office of the Securities and Exchange Commission (SEC) for the third consecutive year. The project was aimed at building the executives and employees’ awareness and support for optimizing waste management at the East Water Building. This year, at the East Water Building, efforts were ramped up to manage and sort infectious waste for proper disposal at permitted agencies. Also, communications activities were conducted to promote the employees’ collaboration in and awareness of waste sorting. Records of waste volumes of all sorts were kept for calculating the reduced amounts of GHG emissions each month as follows:

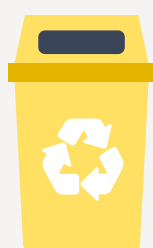
### Head Office



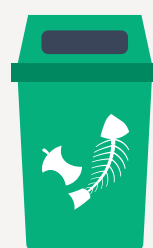
General



Hazardous



Recycled



Organic



Infectious

Amount (Kg per year)					
2022	28,727.80	2022	250.00	2022	4,501.50
2022	2,332.00	2022	131.20		
2021	20,138.20	2021	230.00	2021	3,639.50
2021	1,432.50	2021	80.70		
Reduced GHG emission (KgCO <sub>2</sub> eq per year)					
2022	22,875.92	2022	1,084.15		
2021	15,125.09	2021	665.97		

### Operating areas



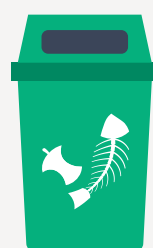
General



Hazardous



Recycled



Organic



Infectious

Amount (Kg per year)					
2022	1,063.10	2022	0	2022	223.00
2022	447.50	2022	0		
2021	960.60	2021	18.00	2021	112.40
2021	294.82	2021	0		

Remark : Information as at 3 December 2022.

## SOCIAL DIMENSION

Operational targets of Eastern Water Resources Development and Management Public Company Limited only, not include UU PCL.

### Targets for 2022

#### Safety

#### No accident

that affects the employee's leave or absent (LTIFR = 0)

#### Community

#### Community satisfaction

be higher than past 3 years

average

**87.40%**



#### Employee

No complaints about human rights and employment

To have

**14**

prototype schools with canteen  
**wastewater treatment**  
system

#### Employee satisfaction

be higher than past 3 years

average

**79.10%**



To improve and repair the community water supply system to provide

**access to clean water**

for

**9**

communities



No complaints from communities affected by the Company's operations that resulted in the Company's cessation of operations.

## Conserve water resources in the Eastern Region

Manage water resources efficiently without compromising well-being of community and the society



## Performance results of 2022

### Safety

LTIFR of employee =  
**2.21** (person/million  
working hours)

LTIFR of contractors and Outsourced  
workers **0.45**  
(person/million working hours)

LTIFR of employee, contractor and Outsourced  
workers =  
**0.75** (person/million working hours)

East Water Building received

# Platinum Award

for high/  
big building

in BSA Building Safety Awards 2022

from the Building Inspectors Association

East Water Building received

# Silver Award

in "Building with Sustainability  
Management"

from Thailand Facility  
Management Association



### Community

Took care of communities  
along the water grid of

**523 km.**

in 23 districts,  
41 municipalities,  
52 sub-district administrations



with community satisfaction score at 92.40%



## Deliver clean water

to the community for consumption  
(service vehicle for drinking water,  
cup water, bottled water)

amounting to  
**382,381** liters

for consumption and agricultural  
through the water tube amounting to  
3,580 cubic meter and through  
15 raw water distribution points to  
village tap water amounting to  
1,758,169.60 cubic meters.



14 prototype schools  
with canteen wastewater  
treatment system resulting in  
**1,280,240** liters

of treated water and 833,439 liters of recycled water.

### Employee

No complaints about  
human rights and employment

Employee satisfaction  
score at

**75.00%**



Employee corporate engagement

averaged **75.83%** (decreased from  
the previous year)

improved and repaired the community water supply system

## to provide access to clean water



for  
**9** communities

benefiting  
**1,883** households.

There were no complaints from communities affected by the  
Company's operations that resulted in the Company's cessation of  
operations.

## Targets for 2023

### Safety

LTIFR

(Lost Time Injury  
Frequency Rate)

decrease **0.50%**

compare with 2022  
(person/million working hours)

### Employee

No disputes/judgements/prosecutions/  
complaints on labor issues.



## Number of human rights complaints

resolved at 100%



At least 2 people with  
**disabilities**  
working in the establishment.

### Community

Stakeholder groups

satisfaction score

more than  
**85.00%**



Community  
access to  
raw water  
sources

in  
**15** areas





## HUMAN RESOURCE MANAGEMENT

Under the rapidly changing world situation, the Company has prepared with personnel development to support upcoming changes. Its focus was on the capacity building in line with its core values of “SHARP” and “embedding” and “ingraining a mindset and behaviors to an organization’s DNA” among its employees at all levels. This was accomplished through the EWG’s internal communication process, promotion of the meanings of corporate core values, and a range of activities to advocate a code of conduct following such value. Examples of the efforts included holding a SHARP activity through Team Synergy, developing a set of questions aligned with the corporate core values for new hire interviews, incorporating the corporate core values in performance evaluation, and using performance evaluation results to determine personnel development plan.

In 2022, the EWG has used SHARP’s Draft Behavior Block that has been jointly analyzed corporate core behavior (SHARP) with executives in the previous year to communicate corporate core values. It also prepared a video material in a format that was easy to understand to communicate with employees before the start of various employees’ relations activities which emphasized the ongoing corporate core values.

From all those activities, one key important factor was their leadership leading by example as a role model. To demonstrate a set of behaviors clearly and broadly, it was necessary to create leaders as influencers, initiators, and role models as this would motivate and encourage the employees to take actions according to a set of model behaviors. Also, there should be activity planning and formal and informal communications as a key driving force of the organization-wide implementation, as well as behavioral performance measurement and evaluation for further analysis of results and process improvement.

In response to the “SHARP” corporate core values, the EWG adjusted its human resources management process in the following aspects.

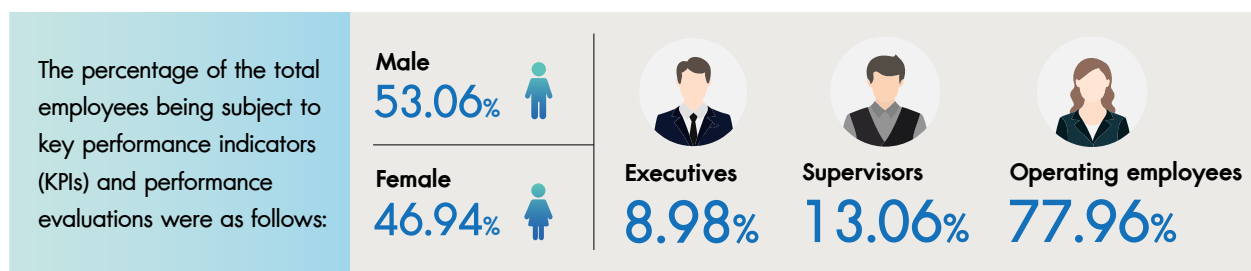
### Human Resources Management Process Adjustment

#### 1. Performance Management System

The Company’s Performance Management System (PMS) manual was created as guidance for communications with the employees and supervisors. The Company’s performance management can be divided into 2 parts as follows:

1. Key Performance Indicator (KPIs) shall be used for assessing outcomes of operations compared to specific targets and providing action plan updates and achievements
2. Competencies shall be used for measuring employees’ work practices, behavior, capabilities, skills, and knowledge essential to the performance of duties against expectations in their current positions.

#### Summary of Performance Evaluation Results for 2022 (Disclosure 404-3)



Remark : Excluding employees in probationary periods.

## 2. Human Capital Management (HCM) system

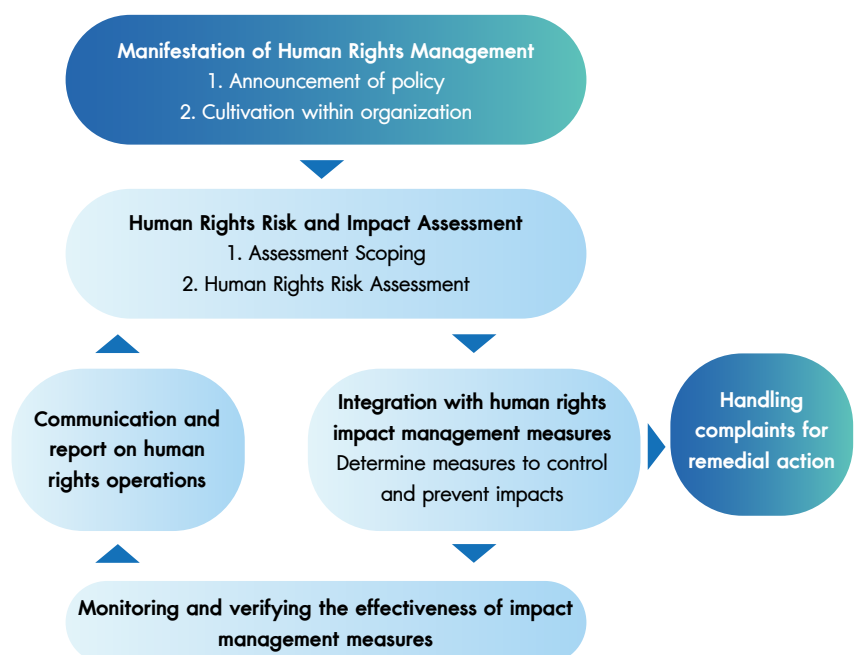
In 2021, the Company has modernized its information technology for HR management system which the employees can use this new system through mobile application which accommodate hybrid working. It helped employees to work faster and more conveniently and strengthen the implementation of “SHARP” core values.



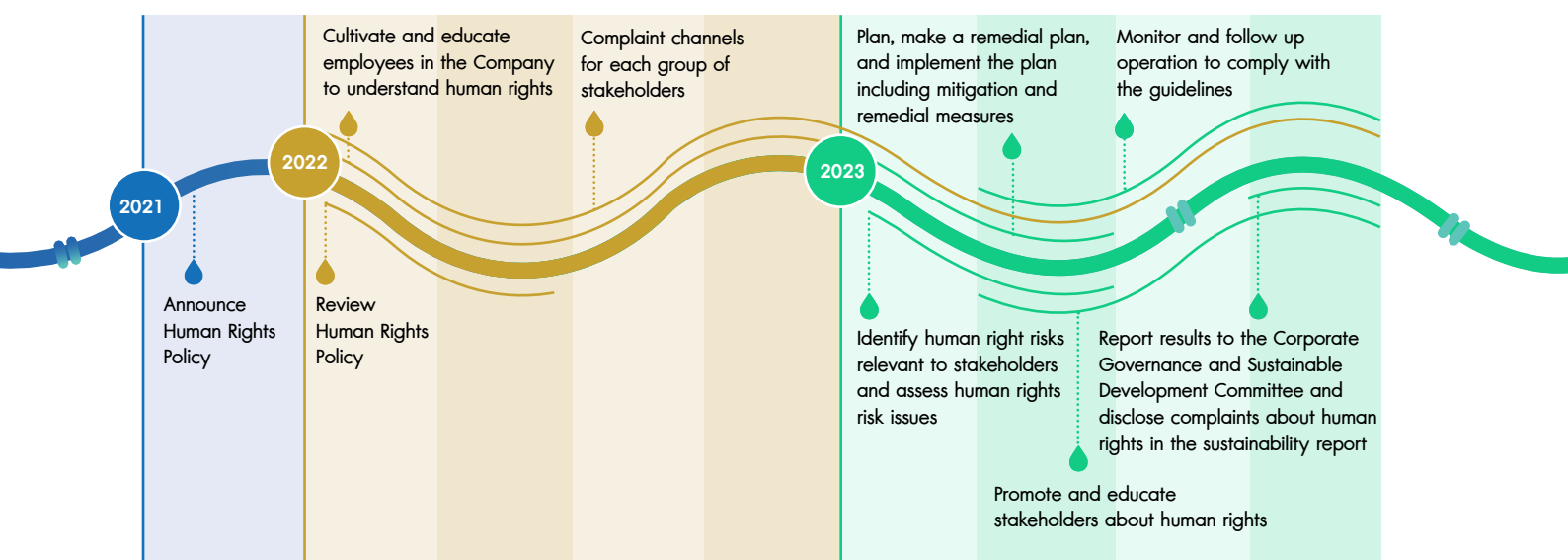
In 2022, it was used to assess the working competency in 360-degree format (evaluation from supervisors, subordinates, and colleagues) of manager group and above. This will provide a more dimension of work competency assessment from many perspectives, which evaluates core and managerial competency.

## 3. Human Rights Operations


The Company conducts water resource management business along with improving the quality of life of stakeholders throughout the supply chain for sustainable growth. The Company has determined to be a Good Corporate Citizen, an organization that grows and conducts business in accordance with good corporate governance principles, including giving importance to protect the interests as well as giving importance to the practice of respecting human rights of stakeholders along with considering the operations that do not cause any impact on society and environment. An overview of the process can be shown as follows:



## Human Rights Operations Roadmap



In 2022, human rights training was organized as follows:

<p> <b>Executives</b></p> <p>Principles and Roles of Comprehensive Human Rights Audit for Executive Course for executives.</p>	<p> Understanding Human Rights Online Course for all employees to study and test their understanding of human rights, in which 94.00% of employees passed the test criteria of 70.00%.</p>	<p>The target is for employees to participate at <b>80.00%</b> </p>
<p> <b>Supervisors and those involved</b></p> <p>Human Rights Risk Assessment Course</p>		

In 2022, EWG has hired 4 people with disabilities to receive equal working opportunities in performing work according to knowledge and ability with suitable salary payment and welfare received. There was also capacity development to increase the working capability for people with disabilities according to their positions.

The Company	Number of People with Disabilities supported	2019	2020	2021	2022
Section 33 Hiring persons with disabilities		3*	3*	3*	3*
Section 34 Remitting contributions to the Fund for Empowerment of Persons with Disabilities		0	0	0	0
Section 35 Concessions for places to sell goods and services		0	0	0	0

Remark : \* The number exceeded the number required by law

UU PCL	Number of People with Disabilities supported	2019	2020	2021	2022
Section 33 Hiring persons with disabilities		1	0	0	0
Section 34 Remitting contributions to the Fund for Empowerment of Persons with Disabilities		1	1	1	1
Section 35 Concessions for places to sell goods and services		0	0	0	0

#### 4. Personal Data Protection

In 2022, the Personal Data Protection Act began to come into force, where the Company continue to focus on the protection of personal data. The Company has prepared the details of the personal data protection guidelines for employees, job applicants, and suppliers, which was available in its website for studies by relevant parties before further action. For example, the job applicants can learn about a kind of data to be stored by the Company and grant their consent to the Company so that it can store or edit the applicants' data or documents as needed. In all circumstances when leaving the Company, the employee shall keep the information, news, and customers' data or personal data obtained as part of the functional duties confidential without disclosing them to any irrelevant parties after the end of employment.

## CARE FOR EMPLOYEES' WELL-BEING AND PERSONNEL DEVELOPMENT TOWARDS A SUSTAINABLE WATER ORGANIZATION (Disclosure 404-2)

### 1. Personnel Capacity Development

In 2022, personnel development was focused on continuous operations according to human resource development policy towards high performance organization and learning organization based on EWG CORE Value (S-H-A-R-P), including adjusting the learning style to be able to develop continuously in a timely manner aligned with business strategy and current global situation. It also focused on treating employees appropriately and equally for sustainable growth. The major developments were as follows:

#### 1.1 Training & Development Program

As employees are valuable resources and important to the sustainable growth of the organization, the Company has designed a variety of development in the form of training, seminars, coaching, mentoring, including practical training covering the entire employee's lifecycle, starting from the first day until the last day of being an employee. It was divided into 3 main phases namely the beginning of learning, development and growth, and retirement preparation, in order to create a good employee experience.

In the development of the Company's personnel competency, it consists of 3 competencies and groups of courses to enhance other skills as follows

#### 1) Development of Core Competency (S-H-A-R-P)

It is a basic compulsory course focusing on developing knowledge, skills, and characteristics that all employee in the organization must have according to the Core Competency to strengthen the corporate core values.

#### 2) Development of Managerial Competency (D-E-V-2C)

It focuses on developing knowledge, enhancing management skills, developing leadership skills necessary for the executive and supervisor level to be a driving force to support business strategies to achieve goals. This also includes preparation for personnel with capability to be ready to grow up in higher level.

#### 3) Development of Functional Competency

It focuses on development of human capacity as standard according to the function in order to achieve the set goals and support clear and concrete career growth. The supervisor will analyze the strengths and weaknesses of employees based on their performance in the past year to enhance to operation & service excellence.

#### 4) Elective Course

This is to encourage employees to develop both now and in the future, including employees in the group that are close to retirement as a preparation before retirement.

### Summary of annual training & development (Disclosure 404-1)



Course	Course Type	Number of courses	%	Benefits	Development achievement in 2022
1. Core Course	<ul style="list-style-type: none"> <li>Problem Solving &amp; Decision Making</li> </ul>	1	0.89	Employees can work to achieve results according to principle of corporate core value [ S-H-A-R-P ]	<b>Level 1 Satisfaction and knowledge assessment</b> <ul style="list-style-type: none"> <li>Result of satisfaction assessment for all course at 87% score, higher from previous year</li> <li>Result of knowledge assessment from training at 100% score.</li> </ul>
2. Managerial Course	<ul style="list-style-type: none"> <li>Unlock your Power</li> <li>One on One Executive Coaching</li> <li>Powerful Communication for Leader</li> </ul>	6	5.36	High-potential and leadership employee can succeed in key role by using individual competency assessment (Psychological Assessment) together with individual coaching to unlock and awaken power to achieve strong leadership through comprehensive development in Performance Coaching, People Skill, and Inner Self	<b>Level 2 Assess performance changes of employees after training</b> To measure behaviors that reflects competency in each area , and supervisor will use the evaluation results to prepare individual development plan (IDP) suitably.
3. Functional Course	<ul style="list-style-type: none"> <li>Human Resource Management</li> <li>Tax and Accounting Management</li> <li>Financial and investment analysis</li> <li>Community Management</li> <li>Project and Construction Management</li> <li>Basic Maintenance Work, Engineering</li> <li>Utilities Systems</li> </ul>	64	57.14	Employees have expertise in their professions.	In 2022, methods for monitoring and evaluating the application of knowledge after training for 3-6 months have been added including guidance from supervisors and reporting concrete results in a total of 12 major courses such as Coaching HR for Non HR, Problem Solving and Decision Making, SUSE Linux and Enterprise Server, etc.
4. Elective Course	<ul style="list-style-type: none"> <li>Sustainable Development</li> <li>Energy Conservation</li> <li>Corporate Governance</li> <li>Knowledge Management Program</li> <li>IT System</li> <li>Risk Management</li> <li>SHE &amp; Environment</li> <li>ISO System [ 9001:2015, 14001:2015, 45001:2018]</li> </ul>	41	36.61	The Company grows sustainably according to international standards	<b>Level 3 Evaluate achievement based on KPIs</b> It will be used in consideration of annual wages and remuneration of employees as an opportunity of employees to receive advice and exchange experiences with supervisors for development in the following year.

In 2022, the investment for personnel development with a total amount

**3.64 million Baht**

(average 15,826 Baht/person/year)

1

Development and Training expenses in the amount of

**2.03 million Baht**

(Average 8,826 Baht/person/year)

2

Organization knowledge management expenses in the amount of

**1.61 million Baht**

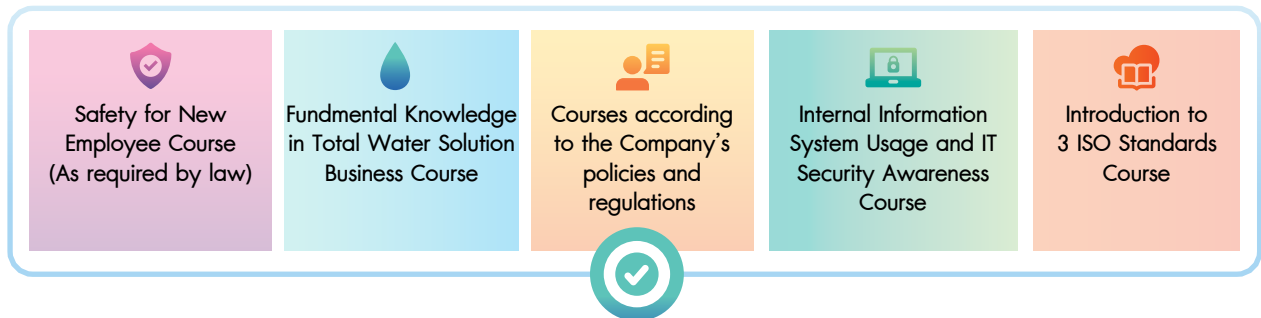
(Average 7,000 Baht/person/year)

divided into

## Training Throughout the Employee Life-Cycle in 2022

### Onboarding for New Employee

The Company provided orientation course for new employee in fully online format so that all new employees can learn by themselves and take Pre-Post Test as a learning assessment. The course has been reviewed and improve regularly every year. The course covers the basic knowledge of the organization for new employees to be aware of important policies, understand culture, practices, and various performance standards of the Company, and be able to apply it correctly. In 2022, a basic knowledge course for new employees has been established in 5 main parts, namely:














**In 2022, all new employees have been trained and assessed the required criteria.**

### Cultivating Basic Knowledge of Sustainable Growth with International Standards












To ensure that the organization management has standardized, transparent, fair, and auditable operations, the Company has cultivated basic knowledge of sustainable development, good corporate governance, as well as quality, environmental, occupational health and safety management systems to all employees by cooperating with relevant agencies to prepare training plan including:

#### Courses on quality systems and environmental management

1	Courses on quality systems and environmental management	Executive Level	Supervisor Level	Operating Level	Total	
		 Male 7 (person)  Female 8 (person)	 Male 19 (person)  Female 13 (person)	 Male 97 (person)  Female 85 (person)	 Employees 229 (person)	
		 Training Hours 24.30 Hours	 Training Hours 222.40 Hours	 Training Hours 2,807.28 Hours	 Training Hours 3,053.98 Hours	<b>99.57</b> % of Total Employees

In 2022, the Company was certified International Standard Quality Management System from Bureau Veritas Certification (Thailand) Co., Ltd. The Company also continued to promote education to employees to improve work processes with important courses such as Laws and Operations Related to Fuel, Environmental Law and Pollution Management, Central Air Conditioning System Management, Greenhouse Gas Reduction Management and Calculation of Carbon Footprint, etc.

#### Sustainability Courses (Disclosure 2-24)

2	Sustainability Courses	Executive Level	Supervisor Level	Operating Level	Total	
		 Male 8 (person)  Female 8 (person)	 Male 19 (person)  Female 13 (person)	 Male 92 (person)  Female 83 (person)	 Employees 223 (person)	
		 Training Hours 21.00 Hours	 Training Hours 221.53 Hours	 Training Hours 275.28 Hours	 Training Hours 517.81 Hours	<b>96.96</b> % of Total Employees



Important courses in 2022 included the SET course on business management for sustainable development (S01-S04 in the form of training and workshops), the GRI Standard Update 2021 (Productivity GURU), Human Rights Knowledge, Human Rights Risk Assessment, and Comprehensive Human Rights Audit Role for Executive Course. The trainings were organized to educate employees at all levels both at management and operational levels in order to raise the organization's sustainability operations as well as being a part to enhance the sustainable development of the Thai capital market and the country.

### Good Corporate Governance Courses

3	Good Corporate Governance Courses	Executive Level	Supervisor Level	Operating Level	Total	
		Male 10 (person) Female 8 (person)	Male 19 (person) Female 14 (person)	Male 79 (person) Female 100 (person)	Employees 230 (person)	100 % of Total Employees
		Training Hours 17.30 Hours	Training Hours 85.30 Hours	Training Hours 127.20 Hours	Training Hours 229.80 Hours	

In 2022, the Company has prepared an E-learning with quizzes for all employees to learn by themselves and take quizzes to review their knowledge, realize the importance, and evaluate knowledge and understanding of the entire company's employees. The important training courses and seminars included Code of Conduct and Anti-Corruption, and Corruption Risk and Control Workshop (CRC), etc.

### Safety, Occupational Health, and Energy Conservation Courses

4	Safety, Occupational Health, and Energy Conservation Courses	Executive Level	Supervisor Level	Operating Level	Total	
		Male 2 (person) Female 2 (person)	Male 18 (person) Female 13 (person)	Male 81 (person) Female 55 (person)	Employees 171 (person)	74.35 % of Total Employees
		Training Hours 19.00 Hours	Training Hours 509.00 Hours	Training Hours 1,612.00 Hours	Training Hours 2,140.00 Hours	

In 2022, the Company still focused on safety operations as one of the common KPIs for all employees. The target was set to have operation without accidents that cause lost time. Therefore, there were activities to promote knowledge and understanding in terms of safety, occupational health, and energy conservation through various activities throughout the year, such as training, seminars, workshops, and Safety Talks activities, etc.

As the Company placed importance on personnel capacity development, resulting in employees having the opportunity to grow in their careers. From the statistics in 2018-2022, it was found that the employees were promoted of level/position within the company at least 10% per year, which was considered personnel development to have opportunity to grow and progress in their career (Disclosure 404-3) as follows:

2018	2019	2020	2021	2022
Total Employees 221 (Person)	Total Employees 229 (Person)	Total Employees 236 (Person)	Total Employees 249 (Person)	Total Employees 230 (Person)
Promote of Level/ Position 12.67%	Promote of Level/ Position 13.97%	Promote of Level/ Position 11.02%	Promote of Level/ Position 11.24%	Promote of Level/ Position 13.04%

## Preparation for Retirement from the Organization

(Disclosure 404-2)


For the group of employees who were close to retirement in 2022, the Company provided development programs to prepare for life after retirement. Four training courses have been organized namely Tax Knowledge, Social Security Benefit Knowledge, Knowledge on Opening Online Market to Earn Money to Solve Loneliness, and Applied Art Training in Designing Cloth Bags and Mouse Pad with STENCIL technique. The result of satisfaction survey was 86.00%.

### 1.2 Knowledge Management

The Company continued to focus on systematic knowledge management of the organization, as well as creation of motivation and participation in the exchange of knowledge and working experience among employees at all levels for more efficient and effective operations and ready to lead to further development as corporate innovation.

In 2022, the Company has defined the success of its knowledge management projects as one of the corporate KPIs and common KPIs with a score of 5 (full score) for both indicators.

In addition, for the implementation of knowledge management in 2022, it continued to follow the learning cycle (EW KM Journey) which was divided into 3 projects as follows:

<div>  <b>Project 1 : EW Knowledge Camp Project</b>                      The operation was divided into 3 parts namely                      Part 1) Training on Principles and Tools                      Part 2) Coaching and Group Action                      Part 3) Pitching Presentation to develop presentation skills                 </div>		
Topic	Goal	Operating Results
Level 1 Systematic Knowledge Management (KM) Class 3	To promote employees' knowledge and understanding on how to develop and gather knowledge	There were 16 projects on KM with various forms of explicit knowledge such as One Point Lesson, One Point Knowledge, and operation manual, etc. which have been collected in the Company's water library systematically for further usage and enhancement.
Level 2 KM for Productivity Improvement (PI) Class 2	To improve work processes for efficiency and effectiveness	There were 16 projects on PI which can answered the organization result dimension which can be divided into 5 areas as follows: 1. Productivity: 15 projects 2. Quality: 4 projects 3. Cost: 4 projects 4. Time Delivery: 12 projects 5. Risk: 1 project



### Project 2: KM WEB Portal System Development Project

Topic	Goal	Operating Results
Development of Water Library (Water Library)	To be a learning center and a new electronic knowledge source for the organization that collects information, knowledge from both outside and within the organization to be convenient to use to unlock various limitations of endless learning.	The development of water library has been completed and it was in the process of system testing in the first phase, with collection of knowledge topics and stored into categories in the knowledge repository totaling 43 categories, 229 topics.



### Project 3 : KM Creators Project #Just Want to Tell Year 1

Topic	Goal	Operating Results
Activities to promote and stimulate the use of the Company's water library	<ul style="list-style-type: none"> <li>To open space for employees to share knowledge or present their works and freely exchange knowledge/experience.</li> <li>To encourage employee to participate in the collection and create knowledge from direct experience in work.</li> <li>To collect and store knowledge in the water library system.</li> </ul>	<ol style="list-style-type: none"> <li>1. There were KM Creators not less than 5.00% which was higher than the target.</li> <li>2. There were more than 20 clips of new knowledge into the Water Library system which was more than the target.</li> <li>3. 100% of employees have accessed to the Water Library system</li> </ol>



**Outstanding Achievements of the Year 2022**

#### Reducing Steps in Considering Water Usage Fees

##### Benefits received :

- Faster customer service resulting in increased customer satisfaction
- Create a good image of the organization in terms of reliability, professionalism, reducing work steps and duration in considering water usage fees

#### Improving Energy Efficiency of Chilled Water System

##### Benefits received :

- The energy used in the Chiller System is reduced by approximately 11,000 kWh/month
- Energy cost were reduced by about 600,000 Baht/Year

In 2022, the satisfaction score of the knowledge management project and improvement of work process was 80.00%. The employees participated in the project had opinion that it was beneficial to the organization at 82.00%, and beneficial to themselves at 80.00%.

### 1.3 Promoting a Culture of Learning and Self-Improvement through Digital Learning

The COVID-19 pandemic crisis led to new model of learning opportunity in the organization. In 2022, the Company has adjusted the learning approach that focus on self development and learning by developing an online learning system (Digital Learning/E-Learning WebPortal) for employees to have more channels and learning

styles in addition to just learning in the classroom. The employees would be able to learn continuously without time and location constraints, and can also review the lesson content or training materials at any time which respond to the new world. There was a Q&A board to exchange knowledge and opinion within the Company. The design and development also considered data security and easy to use.

In 2022, there were a total of 23 online lessons in the system with 32 knowledge clips. The result of learning and training adjustments reflected positive feedback. Employees received convenience in learning, save time and travel expense, and increase knowledge and understanding of the use of technology even better. The results of the satisfaction survey of such project, the speakers, trainees, and users assessed the score of more than 80.00%.

## 2. Employee Welfare Management and Supervision

Employees are the key driving force of the Company in propelling its business to be robust and sustainable. How far the Company can move forward depends upon the ability of the employees to drive innovations.

### 2.1 Hybrid working

From the COVID-19 pandemic since 2020, the Company has allowed employees to work from anywhere (Flexible Workplace) to create a modern corporate culture to cope with rapidly changing situation as well as to respond to diverse work behaviors of employees and still achieved efficient work result.

In 2022, the COVID-19 pandemic situation tended to decrease. The Company has therefore changed the working style to by a Hybrid working in which each department can consider the work style to suit the nature of work. The Company has introduced modern technology to support the working to create a work-life balance enabling employee to create efficient and effective work for the organization, society, and environment on the basis of trust, focusing on results of work.

### 2.2 Workplace Welfare Committee (Disclosure 2-30)

The East Water Group organized an election of workplace welfare committee according to the Labor Protection Act B.E. 2541 (1998). Currently the East Water Group has three welfare committees as follows:

- The two welfare committees of the Company:  
The welfare committee at the Head Office and the welfare committee at the Rayong Operation Center with a total of 10 committee members, representing 4.40% of the total employees.
- The welfare committee of a UU PCL. comprises 8 members, representing 5.63% of the total employees.

The Company's welfare committee (Head Office)				The Company's welfare committee (Rayong Operation Center)				UU PCL's welfare committee			
By level of employees				By level of employees				By level of employees			
Operating 4		Supervisory 1		Operating 5		Supervisory 0		Operating 6		Supervisory 2	
Male 0		Female 5		Male 3		Female 2		Male 5		Female 3	
Central 5		Eastern 0		Central 0		Eastern 5		Central 5		Eastern 3	

## 2.3 Gathering Opinions Through Various Channels for Further Improvement in 2022

Recognizing of the importance of building relationships, motivations, and employee engagement, the Company has gathered recommendations and expectations through the meeting of welfare committee and various engagement channels as well as employee satisfaction survey for 2022 as follows:

### Welfare Scheme (Disclosure 401-2)

The Company has improved the welfare scheme to support the work of employees or reduce the expense burden of employees, allowing them to focus fully on their works as follows:

- **Improvement of Flexible Welfare**

According to the recommendations of the workplace welfare committee as well as diversity of the employees of the EWG in terms of age, gender, status, etc., the Company has improved several types of welfare to be in line with current social conditions. This included the determination of age of children who will receive welfare benefit, revision of criteria for reimbursement of recreational welfare, and acceptance of gender diversity (LGBTQ), which this group of employees can take leave and welfare related to marriage, etc.

- **Welfare for Retired Employees (Disclosure 401-2, 404-2)**

In 2022, there were 2 employees who have reached the retirement age of 60. The Company therefore organized activities to express gratitude for working with the Company. The Company also coordinated with the hospital to allow the retired employees to get a health check-up according to the health check-up program at reasonable price to reduce their expense burden.

### Improvement of Employee Activity Plan








The Company has improved the employee activity plan to focus on communication with employees to understand the status and direction of the Company's future operation through communication channels and relationship building activities within the Company.

## 2.4 Employee Healthcare Under the COVID-19 Pandemic Situation

In 2022, the Company additionally implemented the following healthcare measure for its employees

- The Company continued work from home policy to reduce the risk of spreading the virus.
- The Company provided face masks, alcohol gel, COVID-19 Antigen Test Kit (ATK) for employees and arranged for ATK test before employees participating in activities to reduce the spread of the virus.
- For employees safety, the Company has sprayed disinfectant and ozone in the workplace every times when it was found that employees were infected with COVID-19 in each area to reduce risks in the workplace.

In 2022, the number of employees infected with COVID-19 were as follows:

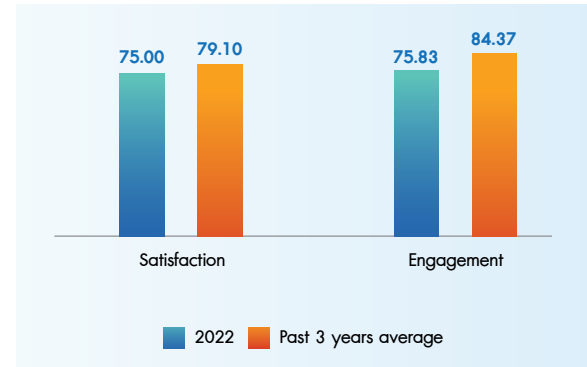
 <b>Employees infected with COVID-19</b>	In 2022		Total 115 persons	In 2022		Total 115 persons
		%			%	
	 <b>Male</b> 58 person	 <b>Male</b> 25.22	<b>50.00</b> %	 <b>Head Office</b> 73 person	<b>Head Office</b> 31.74	<b>50.00</b> %
	 <b>Female</b> 57 person	 <b>Female</b> 24.78		 <b>Operating areas</b> 42 person	<b>Operating areas</b> 18.26	

Remark : Total number of the employees 230 people

### 3. Employee Satisfaction and Engagement Survey Results

From the operations in 2022, the Company has continuously conducted employee satisfaction and engagement surveys on an annual basis with the objective of using the results as information for considering the improvement of policies or work plans related to employee. The Company has changed the way of study by adjusting relationship with attitudes in various dimensions into 6 dimensions namely People, Opportunity, Pay & Benefit, Work environment, Quality of life, and Communication, including increasing resolution of Engagement Scale resulting in a change in the score value. In 2022, the employee satisfaction score was at 75.00% and employee engagement score was at 75.83%, a decrease from the average for the past 3 years.

#### Employee Satisfaction and Engagement Survey in 2022



However, the decrease score was due to the change in the assessment method (Methodology) and increase the resolution of the Engagement Scale which allowed the Company to clearly identify engagement issues which would lead to improvement. In addition, during the year 2022, there were factors that might affect employees' feelings. Nevertheless, there were also several dimensions with increased scores, such as Quality of Life dimension, in terms of focusing on the health of employees in the workplace and fully understanding and paying attention to employee problems, and Work Environment dimension, in terms of assignment of the scope of authority suitable for the job position and clear explanation to employ about the scope of work responsibilities, etc.

The Company developed action plans for 2023 based on comments from the employee satisfaction and engagement survey results in 2022 as follows:



#### Improving the employee activity plan

to focus on communicating to employees to understand the status and direction of the Company's current and future operations, etc.



#### Communication to create understanding through activities

The Company has increased the frequency of communication from senior management so that employees clearly understand various situations of the Company. There was a CEO Townhall activity twice a year (Head Office and Operating area)



#### Improving the Company's work processes

to have a clear, fast and flexible process.



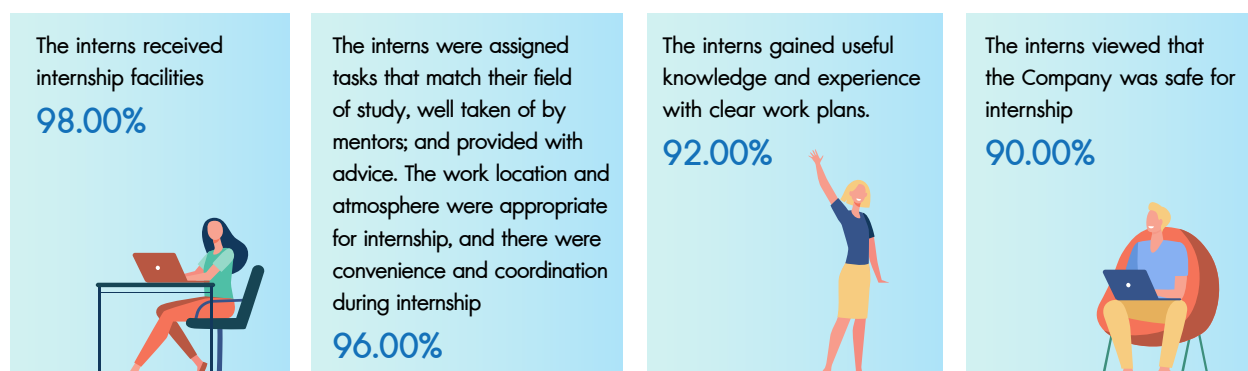
## SHARING KNOWLEDGE WITH SOCIETY

### Student Internship Program

The Company launched a project for students to gain on-the-job training experience so they can build up their capabilities. The number of participants can be summarized as follows:

The number of interns from 2020-2022		
Bachelor's Degree	Diploma	Total (person)
2020 : 4 (person)	2020 : 4 (person)	2020 : 8 (person)
2021 : 6 (person)	2021 : 0 (person)	2021 : 6 (person)
2022 : 8 (person)	2022 : 5 (person)	2022 : 13 (person)

The Company also arranged for mentors to provide coaching throughout the internship period. There were also accident and life insurance policies, and daily allowance for interns as stipulated by laws. For use as reference, in 2022, the Company conducted a satisfaction survey of the interns, and the average satisfaction score is 94.00%. The feedback from the interns can be summarized as follows:



### Communications and Relations Activities

#### Relations Activities

The Company communicated its business outlook, business directions, policy guidelines, and business goals of each year to its employees to create a mutual understanding, coordination, and solidarity. This had a positive impact on the business group's performance efficiency and effectiveness. However, due to the COVID-19 outbreak, the Company's communication activities were conducted virtually. The video clips were prepared to communicate goals and performance of the business group, and shared to employees for understanding and motivation, leading to the collaboration to perform duties to achieve the organization's goals.

#### The Company's CEO townhall meeting

was done to communicate organizational goals from executives to employee for mutual understanding, and teamwork under the "Team Synergy EW: Building Team Power (1+1 must be more than 2)" activity was organized. The employees attended the activities accounted for 80.00% of all employees. The satisfaction score of the activities were 75.00%.



### Activities to make merit for the 30<sup>th</sup> Anniversary of East Water

in a new format where the Company invited monks to preach via online system. It was organized together with CG Day activities to promote sustainable development and good corporate governance by promoting CG knowledge to employees. The EWG has therefore organized an event under the name “Show & Grow For EWG Sustainable Future” on 12 October 2022. The activities included communications, online games, and sharing of KM knowledge by inviting Dr. Wit Sittivaekin as a speaker. The EWG employees attended the activities accounted for 85.00% of all employees. The satisfaction score of the activities were 85.00%.

### Sports Day event

As COVID-19 pandemic remained, the Sports Day event 2022 was held in a new normal way for the 2<sup>nd</sup> consecutive year under the title “EWG Virtual Run To 2023: Continuing the Stream of Merit with Sweat”. The Company has allocated money for merit by donating money according to the total distance run by the employees of EWG (The rate of 1 Baht per Kilometer) to Thailand School for the Blind. The EWG employees participated in the activity accounted for 70.00% of all employees with the total distance of 21,027 Kilometers. The satisfaction score of the activity was 89.00%.

### Various clubs

Various clubs were set up to promote employees’ sports, health, and recreational activities as well as to build good relationships between them. In 2022, there were 5 clubs and EWG employees were members accounted for 36.00% of all employees. Each club had their own activities and publicized their activities to all of the employees.



### Activities to listen to opinions and answer questions from employees

by senior executives were held. They were arranged in the form of lunch between senior executives and employees of each functional line to listen to their opinions and build good relationships between management and all levels of employees. The activities were called “Friendly Noon with CEO” which have been organized 5 times for all functions.



### The New Year's party

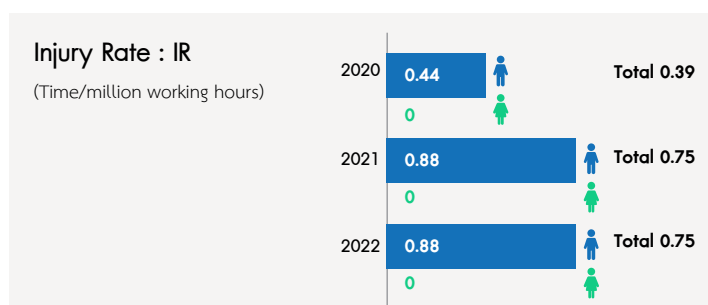
was held with the objectives of giving executives and employees of EWG to meet and build good relationships with each other and help to create collaboration in the work. It was also an opportunity to thank employees and give rewards for their works throughout the year. The EWG employees participated at 81% of all employees. The satisfaction score from organizing the activities was 86.00%.

## SAFETY, OCCUPATIONAL HEALTH, AND WORKING ENVIRONMENT

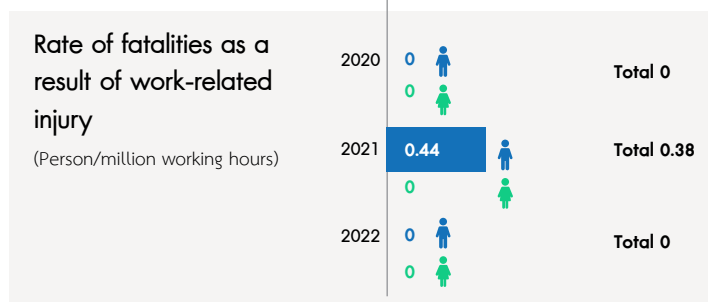
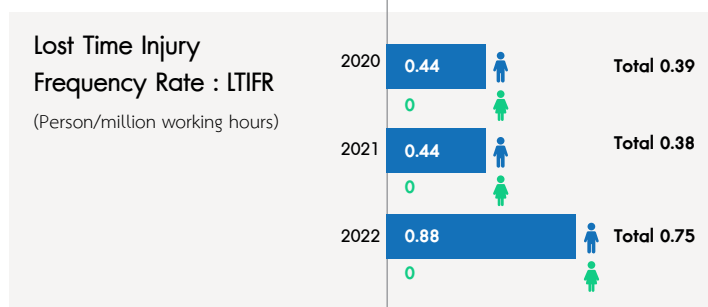
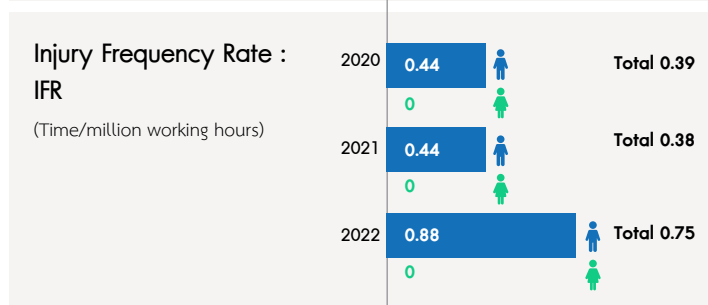
(Disclosure 403-1, 403-2, 403-7, 403-8, 403-9, 403-10:2018)

The EW Group placed importance on safety, occupational health, and working environment management with the goal of “zero workplace accident”. In addition to carrying out operations according to law, it also adopted relevant standards to create a safe working environment and enhance quality of life of its employees, suppliers, and contractors. Furthermore, the EWG developed and announced its regulations and manual regarding occupational health, safety, and working environment management as well as other relevant documents. This was to comply with the ISO 45001:2015 for occupational health and safety management standard system.

In 2022, the Work Instruction document was revised by adding flow diagram to be convenience for the usage, and the performance record document was improved to be in line with nature of actual operation and be in line with relevant laws.

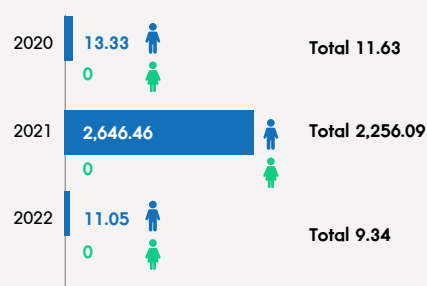


### Statistics of the Company's Workplace Safety (employees, contractors, and outsourced workers) for 2022



### Lost Day Injury Rate : LDIR

(Day/million working hours)



#### Remarks :

Lost time Injury Frequency Rate : LTIFR) = (Number of lost time injury X 1,000,000)/Number of hours worked by gender

Lost Day Injury Rate: LDIR) = (Number of lost workdays X 1,000,000)/ Number of hours worked by gender

Injury Rate: IR) = (Total injuries X 1,000,000)/Number of hours worked by gender

(Table of summary of total accidents of the employees, contractors, and outsourced worker for 2022 is shown in Annex in page 122)

From 2022 operations, there were 2 lost time accidents as follows:

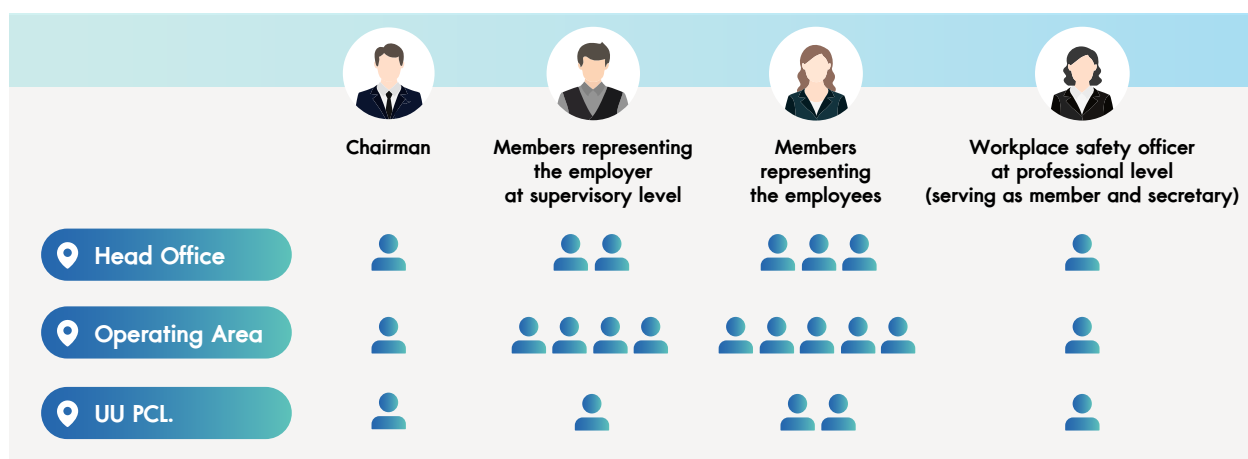
- The Company's employee got a moderate injury (recordable work-related injuries) for 1 person due to the driver drove and hit the truck, as a result he got injured and took 23 days off from work due to the accident. The Company setup an investigation Committee to analyze the cause and preventive measures to prevent recurrence. There were measures for employees to assess their physical readiness before starting work, and if not ready, notify the supervisor. The work was also publicized for employees to acknowledge and aware of work safety.

In addition, the Company organized training on defensive driving to assess driving efficiency, correct driving training, and to change existing attitudes to be a driver who can drive in a defensive manner and change the behavior of the driver to be safe. Leading to a reduction in potential land accidents.

- The Company's contractors and outsourced workers got a moderate injury (recordable work-related injuries) for 1 person because the contractor had an electric shock accident while checking the energy value before annual maintenance of refrigeration system. As a result, the injury took 2 days off from work in the event of an accident. From the accident above, consulting firm, supervisor, and contractor set up an investigation committee to analyze and identify cause and preventive measures to prevent recurrence. There were public relations measures to raise awareness about work safety among contractors.

For the subsidiaries, there was no accident to employees, contractors, and outsourced workers. Table of summary of total accidents of the employees, contractors, and outsourced workers of subsidiaries for 2022 is shown in Annex in page 126)

In 2022, the EWG had 3 Working Groups (Committee) on Safety, Occupational Health, and Working Environment i.e. Working Group of the Head Office, Working Group of the Operating Area, and Working Group of Subsidiaries, to thoroughly oversee the operations in the respective areas under responsibilities. They hold meeting every month and consist of members as follows: (Disclosure 403-4 : 2018)



Roles and responsibilities of the three working groups cover:



## Safety Activities (Disclosure 403-3, 403-6, 403-7, 403-10:2018)

The Company undertook a series of safety activities as follows:

### 1. Annual Health Examination for 2022:

Results of the assessment to identify threats to health and assess the health risks of employees, contractors, and outsourced workers can be summarized as follows:

- 1.1 Employees: It was found that there are threats to health such as light, noise, UV rays, blue light, chemicals, working posture with computer, psychosocial, biological (communicable diseases), heat, dust, and security threats, etc. In addition, the Company has organized additional health examination programs according to risk factors such as hearing test, visual inspection, etc. In 2022, the Company's employees did not find the incidence of occupational diseases.
- 1.2 Contractors and Outsourced workers : The Company required that its contractors and outsourced workers have an annual health check to monitor chronic communicable diseases, diabetes, high blood pressure, abnormal blood lipid, that may affect cardiovascular disease, as well as monitoring abnormalities from work such as vision loss, hearing loss from loud noise, etc. Especially working in hazardous areas, contractors and outsourced workers who enter the area must have health check-up results in accordance with law and strictly follow it. In 2022, contractors and outsourced workers of the Company did not find the incidence of occupational diseases.

### 2. Safety Communications:

A monthly journal on safety, health, and environment (SHE News) was distributed to the employees to share news and information as well as create awareness of safety, good health, and environmental care.

### 3. Safety Training:

A training plan on safety, occupational health, and working environment was established for each target group of employees. There were 13 training courses facilitated in the past year (Disclosure 403-5: 2018) for example:

Training Course	Target Group	Company's Performance	Subsidiaries' Performance
Safety, Occupational Health, and Working Environment Course for General and New Employees for 2022	EWG employees	The training was facilitated all year long (when new hires were employed) Total participants: 14 persons Format: e-Learning through HCM	The training was held 3 times (1 time/quarter) when new hires were employed Total participants: 16 persons Format: Online internal training
Courses for Safety Officers at Managerial and Supervisory Levels for 2022	EWG employees (managerial and supervisory levels)	There were 8 trainings held (when new hires were employed/as per the corporate criteria) Total participants: 13 persons Format: Online external training	There was 1 meeting held (when new hires were employed/ got an appointment) Total participant: 1 person Format: Online external training
Courses on Workplace Safety, Occupational Health, and Working Environment (SHE) Committee	<ul style="list-style-type: none"> <li>Members representing the employer at supervisory level</li> <li>Members representing the employees</li> <li>The SHE committee members</li> </ul>	There were 3 trainings held (when there were new appointees) Total participants: 9 persons Format: Online external training	There were 4 trainings (when there were new appointees) Total participants: 4 persons Format: Online external training

Training Course	Target Group	Company's Performance	Subsidiaries' Performance
Courses on Basic Fire Fighting and Fire Evacuation Drill for 2022	EWG employees	There was one training held Total participants: 38 persons Format: On site internal training	There was one training Total participants: 3 persons Format: On site internal training
Courses on Work Safety Procedures for Chemicals Handling for 2022	Employees whose work duties were related to chemicals handling	The training was held twice Total Participants: 33 persons Format: On site internal training	-
Courses on Hazardous Incident Control and Response for Hazardous Emergencies	Employees whose work duties were related to chemicals handling	-	The training was held once Total participants: 26 persons Format: On site internal training
Behavior-Based Safety Course	EWG employees (managerial and supervisory levels)	The training was held 3 times Total participants: 122 persons Format: Online internal training	-
Clean & Safe Workplace Course	EWG employees (Committee for 5 Sor Activities)	The training was held once Total participants 22 persons Format: Online internal training	-
Courses on Safety in Working with Electricity and Helping People Suffering from Electrical Hazards	Employees whose work duties were related to electricity handling	-	The training was held once Total participants: 15 persons Format: On site internal training
Courses for Crane Operator, Signal provider to Crane Operator, Material Holder, or Crane Controller	Employees whose work duties were related to crane handling	-	The training was held once Total participants: 18 persons Format: On site internal training
Review of Crane Work Course	Employees who have passed the Course for Crane Operator, Signal Provider to Crane Operator, Material Holder or Crane Controller for 2 years	-	The training was held once Total participants: 14 persons Format: On site internal training
Courses for Authorizer, Supervisor, Assistant, and Operator in Confined Space	Employees whose work duties were related to confined space	-	The training was held once Total participants: 9 persons Format: On site external training
Confined Space Permission Course	Employees whose work duties were related to permission to work confined space	-	The training was held once Total participants: 2 persons Format: On site external training

#### 4. Health Promotion and Office Syndrome Prevention

The EWG held a project to promote health and prevent office syndrome symptoms for the 3<sup>rd</sup> consecutive year with the view to prevent work hazards among workers such as neck-shoulder-head pain. The pain symptoms were caused by improper postures or long hours of sitting in front of computer screens without changing positions. The project activities include the following:

- Physical massage activities to relieve office syndrome symptoms
- Discussion activity “Bodily pain, is it...ERGONOMIC OFFICE SYNDROME?”

#### 5. Safety Month Event

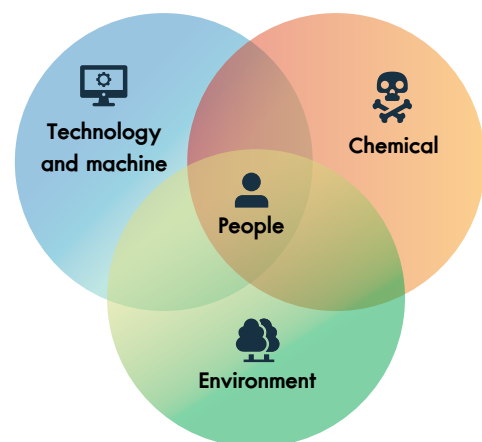
The EWG hosted an online Safety Month Event to promote work safety awareness to comply with social distancing requirements during the COVID-19 pandemic. The goals and objectives were to instill awareness of work safety in employees to know how to work safely and can prevent dangers and accidents correctly. It was also to create unity within the organization and to create a happy working atmosphere, Happy Work Place, and employees who pay attention to safety will have good health. It was also to convey the executives’ intention to place importance on work safety to employees. There were 3 activities namely:

1. Organizing exhibitions to disseminate safety knowledge including Fire, Safety at Work in Confined Space, Safety Signs, Safety in Chemical Usage, Personal Protective Equipment, Hazard Prevention and Rescuing People from Electric Shock, Ergonomics, Safety in Working with Machines.
2. Activities to answer questions on basic knowledge of safety, occupational health, and environment through Yammer, Line, E-mail และ Poster
3. Safety & Health Talk Activity on the topic of “Taking Care of Physical and Mental Health, Emotional Manipulation Under All Types of Changing Situations” by lecturer Dr. Porama Muthitaporn, an expert in psychology and Ms. Sunisa Sukbunsang.

From organizing those activities, the employees have reviewed their knowledge and understanding of safety, occupational health, and environment. It also encouraged executives and employees at all levels to realize the importance of workplace safety and focus on reducing workplace accidents. It promotes better health while employees work happily and reduce work stress.

#### 6. Accident Predictive Technique activity

focused on creating safety behaviors for employees leading to the creation and improvement of the organization’s safety culture. The activity was organized with employees in the Company’s operating areas to create employee participation. In the work of each day, regular inspections were planned, starting from the operational method, machine conditions, chemicals, and work-related environment as well as the operator. There was a system to follow up and take corrective action in a timely manner, making employees aware about safety including identifying unsafe behaviors leading to preventive measures before accidents occur.



In 2022, the goals and KPIs have been determined. Executives and all employees of the operation function must participate in such activity on an ongoing basis. According to the assessment, it was found that 90.82% of employees in the operation function were continuously involved in the activities and achieved the set goals, with 9.18% of employees in the operational function failed to meet the set goals.



## 7. Behavior-Based Safety (BBS) Cultivation Project

The Company places importance on and promotes the organization to have a culture of safety. Therefore, it has organized to have a Behavior-Based Safety (BBS) activity project to provide employees with knowledge in the principles of safety behaviors creation, communication and motivation techniques to create safety behavior, observation techniques to prevent recurrence of unsafe behavior, and its efficient implementation. The executives focus on the organization to have a safety culture that arises from the safety attitude and good awareness of the employees in the organization, which is the principle of good safety behavior. The activities were divided into 2 parts:

1. Training on Behavior-Based Safety (BBS) was organized for executive and supervisory levels.
2. Activity to search for hazard and risk in workplace was organized for employees working at the Head Office (East Water Building) by requiring employees to report events or take pictures of situations that may cause accidents within the East Water Building such as Unsafe Act, Unsafe Condition, Accident, Incident, and Near miss. The objective was to detect danger in the workplace and to prevent potential dangers.

## 8. Workplace Safety Audit

8.1 Measurement of light: The Company inspected the lighting in the workplace once as follows:

	Spotting-on Inspection				Area Inspection			
	☀ Daytime		☾ Nighttime		☀ Daytime		☾ Nighttime	
	Passed Standard (point)	Not Passed Standard (point)	Passed Standard (point)	Not Passed Standard (point)	Passed Standard (point)	Not Passed Standard (point)	Passed Standard (point)	Not Passed Standard (point)
📍 Head Office	218	15	N/A	N/A	114	41	N/A	N/A
📍 Chachoengsao	19	6	14	11	15	0	15	0
📍 Chon Buri	24	1	15	10	13	4	11	6
📍 Rayong	103	8	89	22	52	4	49	7

Based on the inspection of lighting in the workplace, the Company has setup remedial plan, which would be implanted in 2023.

8.2 Working equipment: The Company has checked the working equipment everyday including Motor, Pump, Accessory Pump, Valve system, Electrical system, Fire Alarm system, Control SCADA/Instrument, flowmeter, online water quality meter, etc. It was found that they are in normal condition and ready to use.

8.3 Fire protection equipment: The Company has arranged for the provision of fire protection equipment by supplying hand-held fire extinguishers, installing a fire alarm system, preparing fire escape routes, installing hand-held fire extinguishers, along with regularly inspecting all kinds of safety equipment as categorized below:

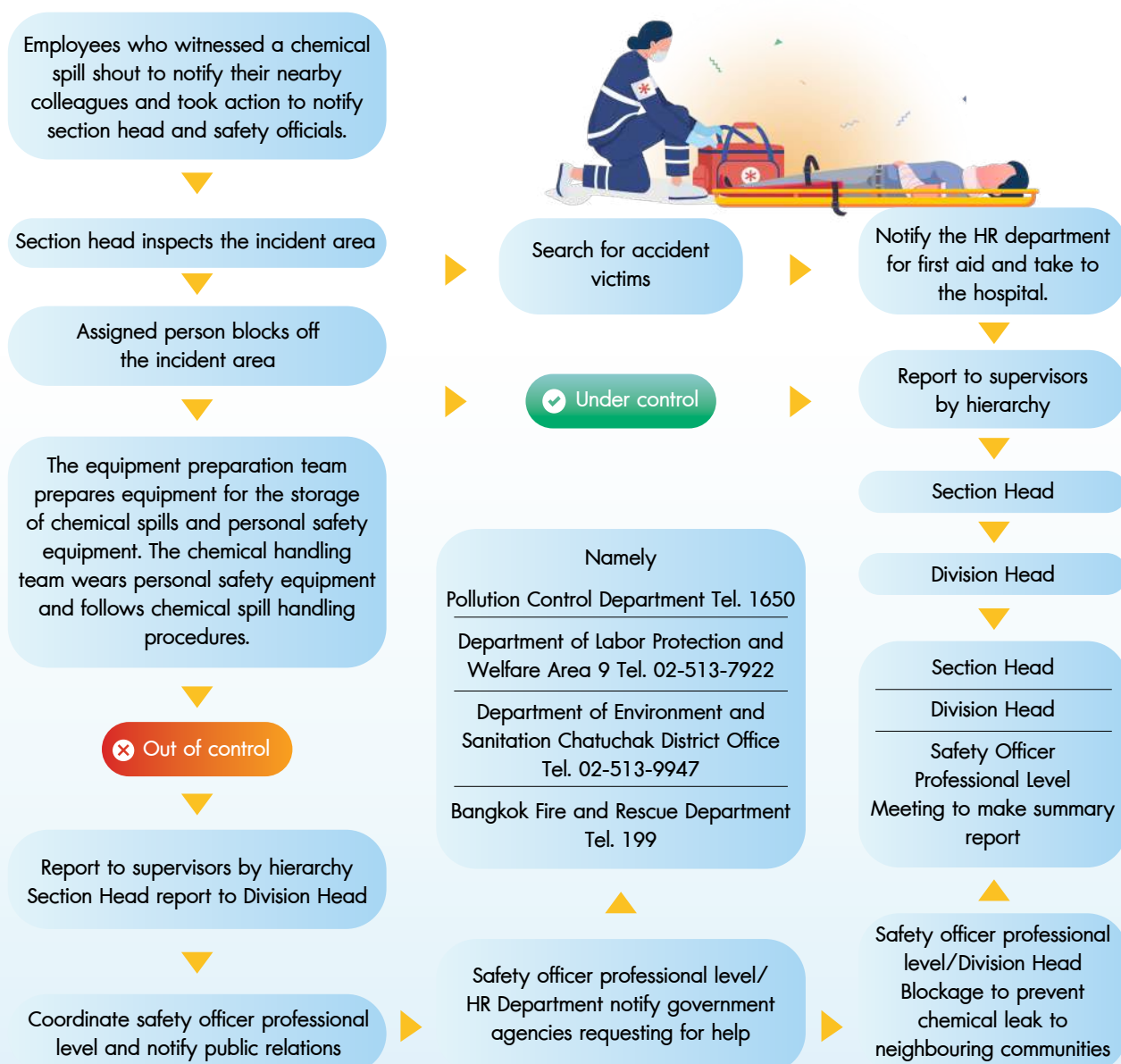
1. Inspection form of hand-held fire extinguisher (FM\_Por\_400-017)
2. Inspection form for portable gas detector (FM\_Por\_400-018)
3. Inspection form for emergency lights and fire escape signs (FM\_Por\_400-020)
4. Inspection form for manual fire alarm device (FM\_Por\_400-031)
5. Inspection form for automatic fire extinguishing equipment (FM\_Por\_400-032)

8.4 Personal protective equipment: The Company provided employees with personal protective equipment (PPE) that meets standards. Before receiving the equipment, the Company requires the employees to study details of the use of PPE and how to take care of it such as safety shoes, safety hat, earmuffs, safety glasses, and leather gloves.

- 8.5 Leakage of hazardous substances: Chemical used by the Company is only Sodium Hypochlorite. The Company has established a chemical storage area in accordance with Ministerial Regulations prescribing standards for management and operation of safety, occupational health, and working environment regarding hazardous chemicals B.E. 2556 (2013). The Company has inspected storage area for leakage chemicals monthly. There is a report of a list of hazardous chemicals with details of the safety information of hazardous chemicals (Sor Or.), a report of measurement and analysis of the concentration of hazardous chemicals in the atmosphere of the workplace and the hazardous chemicals storage area (Sor Or.3), and declaration form of producers, importers, exporters, or persons in possession of hazardous substances under the responsibility of the Department of Industrial Works (Wor Or. Or Kor 7) as required by law. (Disclosure 305-6)

In 2022, no chemical spills were found, and a contractor was hired to inspect airborne emissions to confirm that, in addition to physical inspection, there was no leakage (airborne) that could not be physically detected. There is also an annual chemical spill rehearsal with relevant parties. (Disclosure 306-3)

### Emergency Response Process in Case of a Chemical Spill



## Emergency Management

The Company placed emergency management as one of its priorities. To prepare for any incidents and mitigate any potential impact on the Company's employees and properties, the Company took relevant actions in 2022 as follows:

1. Preparing a Business Continuity Management (BCM) manual and a Business Continuity Plan (BCP); and testing the BCP at the Head Office and operation control.

The Company tested the completeness of the BCP as well as the knowledge and understanding of functional duties and responsibilities. The Company ensured the readiness of its information system and operating systems, alternate workplace, and the communications between the employees working from home, internal units, and external agencies.

2. The Company's annual firefighting and evacuation drills were divided into 2 areas as follows:



### Head Office area, East Water Building

The drills were divided into 2 sessions i.e., firefighting and evacuation drill at night and during business hours.

### All operating areas

(Rayong, Chon Buri, and Chachoengsao)

These were to prepare for evacuation practice, fire protection system testing in case of an incident, with government agencies, fire stations, police stations, hospitals, training agencies, and neighboring buildings cooperated and supported the drills, in which the objectives of the drills were accomplished.

3. The Company's annual chemical spill emergency drills were conducted to prepare for hazardous chemical or fuel spill operations, as well as waste management in accordance with the Ministerial Regulations.

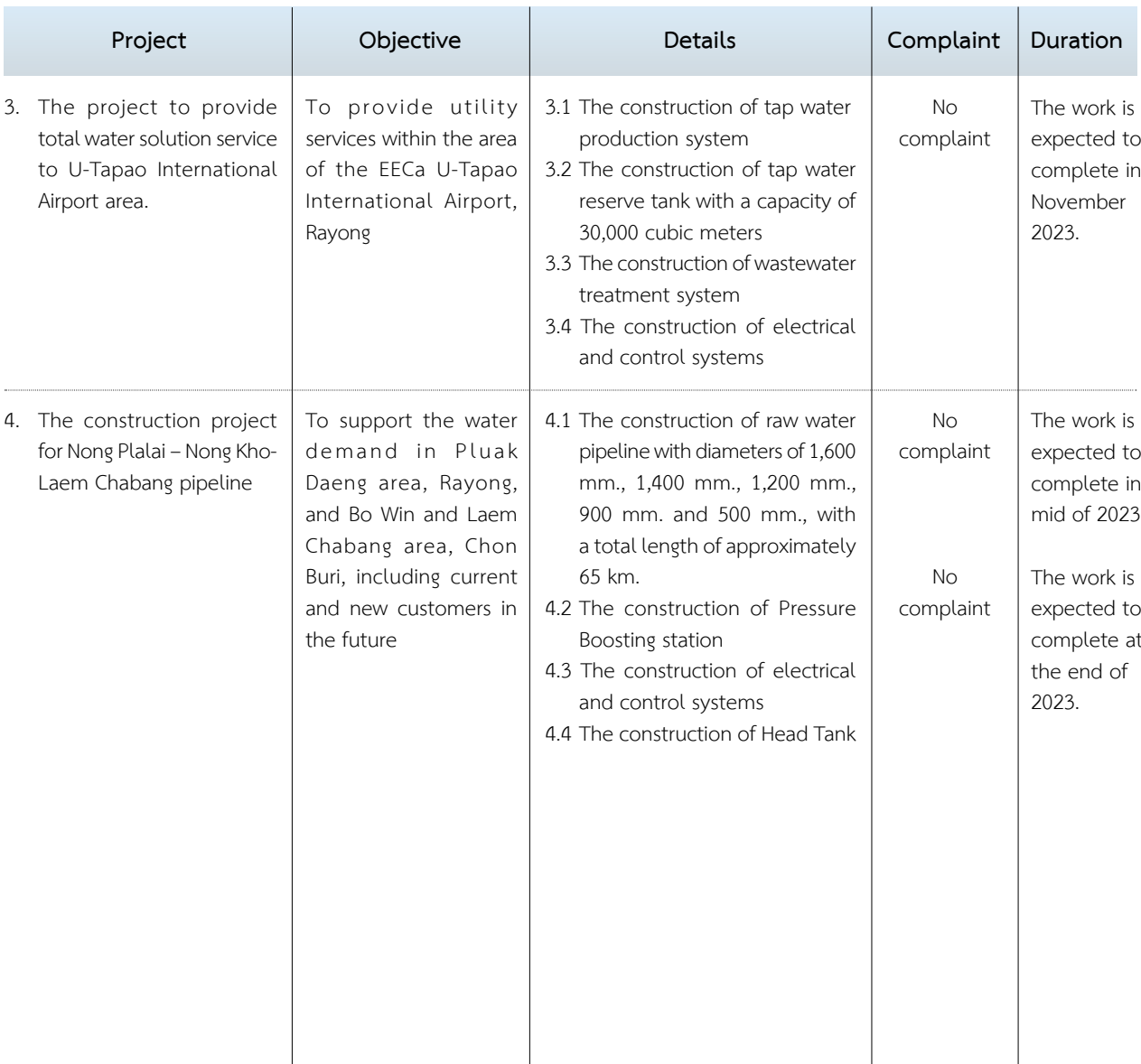
## CONSTRUCTION IMPACT RESPONSIBILITY

(Disclosure 305-7, 413-1, 413-2)

The construction projects complied with the guidelines for project management efficiency improvement regarding air pollution prevention and construction environmental impact mitigation. The standards for acceptance of the road restoration works along the raw water pipeline were met. The representatives of the land owner agencies that permitted the construction projects also joined the inspection and certification of work. The Company held meetings with contractors and representatives of the land owner agencies to notify them about the onsite construction operations. In the case of any impact, the Company would jointly identify problem, root causes, and solutions to the problems as well as closely monitor progress updates on a weekly basis.

The construction projects were located inside and outside of the Company's area, such as the Government sector areas and laying of pipeline through the communities' areas. The construction process would commence subject to authorities' approval and communities' endorsement to prevent any impacts on the communities and the environment. The Company strictly controls its operations in accordance with the work control and safety standards of relevant departments. In 2022, the Company carried out 4 construction projects as follows:

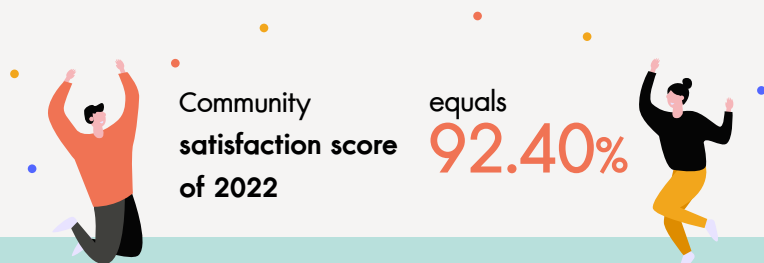
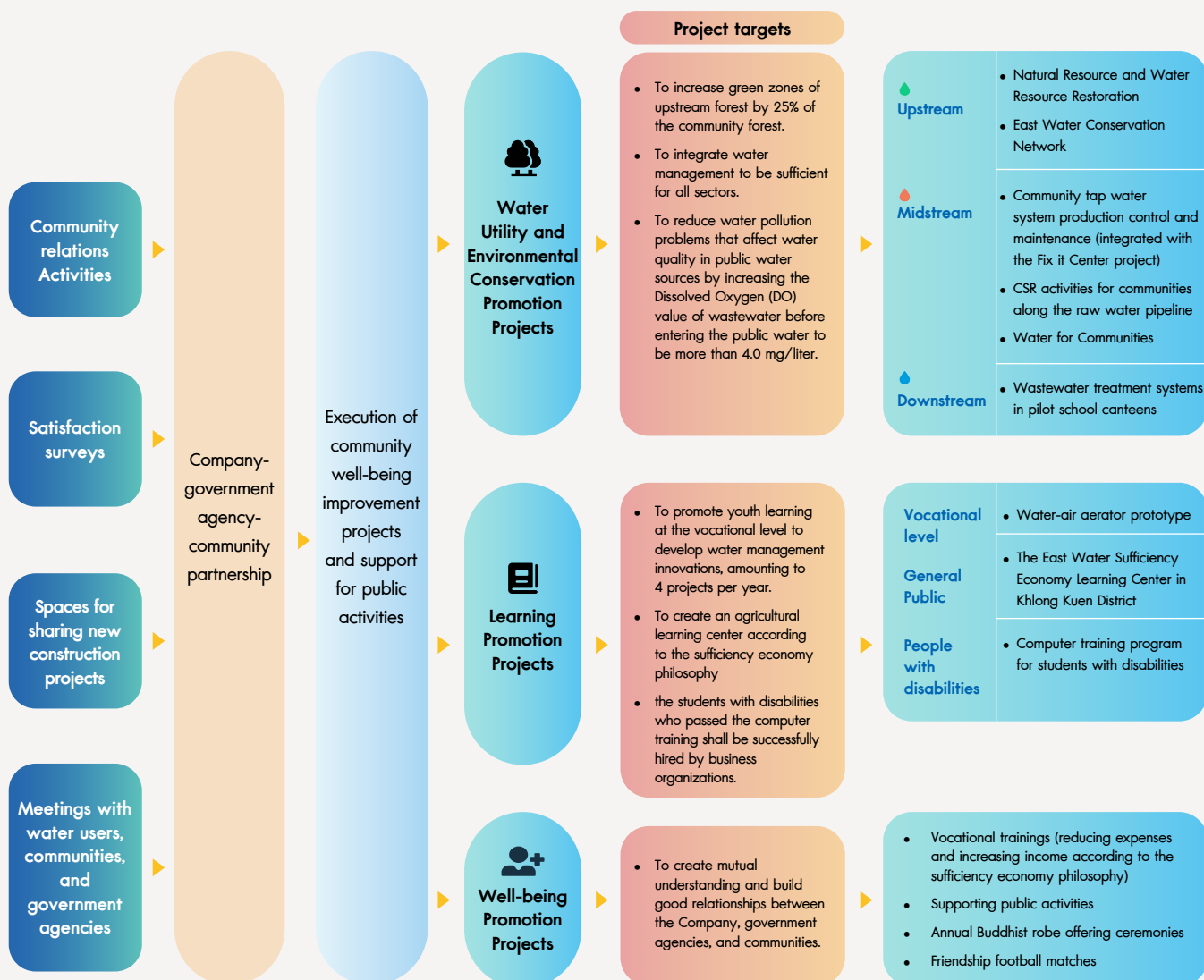
Project	Objective	Details	Complaint	Duration
1. The project to enhance efficiency of water distribution at the Nong Plalai-Nong Kho Pump Station 2	To enhance efficiency of the water distribution to water users in Chon Buri and Rayong.	1.1 The construction of a 10-km pipeline from the Highway 3191, Khao Noi Intersection, Ta Sit Subdistrict, Pluak Daeng District, Rayong to Hemaraj Eastern Seaboard Industrial Estate 3, Nong Sua Chang Subdistrict, Nong Yai District, Chon Buri.  1.2 The construction of a raw water floating pump station in the Nong Plalai reservoir at the Nong Plalai Operation Office.	No complaint	The work was completed.          The work was completed.
2. The construction project for the raw water pipeline Khlong Luang reservoir – Chon Buri	To add an additional water supply source in the service area of the Company with the capacity of not less than 20 million cubic meters per year as part of the support for the government policy on the Eastern Economic Corridor (EEC).	2.1 The construction of a floating pump station in the Khlong Luang Rachalothorn reservoir at a government agency's site. 2.2 The construction of a pressure booster station and an elevated water tank in the Company's site. 2.3 The construction of a water pipeline with a diameter of 1,200 mm and a length of 45-20 km. in the areas of government agencies and local communities along the roads under responsibility of the government agencies concerned.	No complaint	The work is expected to complete in February 2023.



## COMMUNITY SUSTAINABILITY PROJECTS

(Disclosure 203-1, 413-1)

The Company conducted sustainability activities to support the communities' quality of life, access to clean water, and sufficient water supplies for consumption and agriculture based on shared water management with all sectors. Examples included community relations activities, spaces for sharing the Company's new construction projects, meetings with water users, and satisfaction surveys of communities and government authorities on an annual basis. These activities helped the Company to understand the communities' wants or expectations which would be inputs used for strategic planning and project improvement on an ongoing basis. Also, the Company developed Line@ and Facebook Page "East Water CSR" channels to help speed up communications and build a mutual understanding with the communities, which helped fix or relieve difficulties of the communities efficiently.



To attain the goals of managing sufficient water supplies for all sectors, improving the well-being of the communities for sustainable development, and building engagement with the communities, there were three main life quality improvement projects as follows:

1. Water Utility and Environmental Conservation Promotion Projects
2. Learning Promotion Projects
3. Well-being Promotion Projects

#### Benefit from Project Implementation

##### Company

- The Company has been accepted by the communities, affecting the amount of water allocated by the government.
- The Company had business growth towards creating value with the communities.
- There was water quality monitoring in raw water sources, which were the Company's source of water supply.
- There was a reduction of amount of wastewater from school canteen that will affect the water quality in the Company's raw water sources, by educating about wastewater treatment and recycled water to pilot schools. Treated water could be reused at 40.00% of all wastewaters.

- Knowledge regarding water management innovation.
- Company's area was utilized and the Company was accepted by local communities.

- The Company had more access and understanding of the context and needs of the community resulting in cooperation in developing projects to improve the communities' well-being.

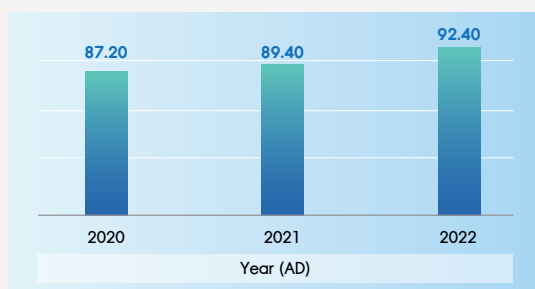
##### Community and Environment

- Upstream forests became fertile with more green zones; additional trees were grown at 25% of the community forest; and a balance in an ecosystem was preserved. Those favorably affected the hydrological cycle, leading to sufficient water supplies for all sectors, and appropriate water allocation to the Company.
- The Company together with schools and communities, monitored and kept tracks of water quality in different water sources providing raw water supplies for the Company. East Water conservation youth network was built with scholarships granted to 120 students per year.
- Integrated water management between the Company, government agencies, water users, and communities led to appropriate water allocation and sufficient supplies for the stakeholders, hence reduction in water shortages for all sectors.
- Communities could access clean water for consumption at 9 communities per year (1,883 household).
- Communities have access to raw water sources to produce tap water for 15 villages.
- The youth at vocational level learned professional repairs skills for the tap water systems of 9 village communities per year.
- Seven pilot schools implemented canteen wastewater treatment systems. The goal is to increase the number of pilot schools from 7 to 14.
- Water pollution affecting water quality in public water sources was reduced through increasing the dissolved oxygen (DO) value in the released water to more than 4.0 mg/liter.
- The youth, educational institutes, and nearby communities appreciated the value of water resources and optimized water usage for cost saving and increase in agricultural productivity through watering trees with treated water.

- The Company developed innovations on water management and community support through 4 projects per year, and improved well-being of 4 communities per year.
- The youth at vocational level in four institutes were equipped with professional skills in creating water innovations with 20 scholarships granted per year.
- The Company joined hands with government sectors and communities in establishing a sufficiency economy learning center to disseminate knowledge about agricultural farming according to the sufficiency economy philosophy and use of the Company's land for the benefit of nearby communities.
- The Company together with the Office of the Nonformal and Information Education in Chachoengsao offered computer training courses for students with disabilities. Hence, more than 10% of the participants were hired by business enterprises.

- Communities' well-being in terms of sports, religion, culture and Thai traditional, and environment were promoted.

**Community and government agency satisfaction scores towards the company's Corporate Social Responsibility (CSR) activities in 2020-2022**





## Water Utility and Environmental Conservation Promotion Projects

The Company realized the importance of the environment and the community well-being improvement. It received continued support from communities and government agencies in holding activities. There were three areas of activities: upstream, midstream, and downstream as follows:



The Company placed importance on the preservation of natural resources and environment in the area surrounding the reservoir and natural water sources in Chachoengsao, Chon Buri, and Rayong, as well as upstream forests that were five provinces bordering forest in the eastern region, therefore the Company advanced its collaboration in preserving upstream forest areas, keeping forest ecosystems fertile, and maintaining a balance of a hydrological cycle, as well as monitoring changes in water quality in different water sources of Chachoengsao, Chonburi, and Rayong. There were 2 projects in collaboration with local communities as follows:

### 1. Natural Resource and Water Resource Restoration

#### Targets

- To distribute 20,000 seedlings per year
- To increase green zones in the five provinces bordering community forest in the eastern region by growing additional trees at 25% of the community forest annually.
- To absorb carbon dioxide
- To maintain the balance of the ecosystem and preserve aquatic animals in the mangrove forest of the Bang Pakong River.

**Implementation Period** 2011 - Present

#### Implementation in 2022

The Company cooperated with network of the five provinces bordering community forest in the eastern region to maintain community forest, i.e. Ban Khlong Yai Thai community forest, Khun Song Subdistrict, Kaeng Hang Maeo District, Chanthaburi, by organizing activities such as making survey route around community forest, creating a forest fire line, taking care of the forest, as well as organizing activities to plant additional forests with 1,950 trees, increasing green area by more than 5 Rai (green area is calculated from 400 trees/Rai), and giving away 20,000 seedlings/year. The Company also cooperated with government agencies and local communities organized tree planting activities in other activities totaling 4,500 trees. This resulted in the absorption of 238-396 tons of carbon dioxide per year (one tree absorbs 9-15 kg of carbon dioxide per year on average)

Support SDG Goals 13.3, 15.1, 15.2



### 2. East Water Conservation Network

#### Targets

- To develop 120 young leaders annually under East Water Conservation Network

**Implementation Period** 2014 - Present

#### Implementation in 2022

- The Company granted scholarships to 120 youths
- The Company granted water quality inspection funds to organize water quality monitoring and inspection activities at 6 locations (canals and rivers in Ban Pho District, Chachoengsao, canals and rivers in Pluak Daeng District, Rayong, Dok Krai Reservoir, Non Plalai Reservoir, Khlong Yai Reservoir, Prasae Reservoir) enabling the communities to be aware of changes in water quality each year to prepare a plan for protection and restoration of natural resources and water sources.

Support SDG Goals 4.4, 6.3, 6.6





The Company is committed to promoting and improving the well-being, in terms of water utilities, of communities along the Company's raw water pipeline. This has been done through a variety of well-being development projects as appropriate and needs of communities in each area. The objective was to allow communities along the Company's raw water pipeline to have access to clean water sources for consumption and agricultural equally. In addition, the Company has partnered with the communities, government agencies and water users along its raw water pipelines to enter MOUs to better the well-being of such communities This reflected the Company's capability on water management and corporate social responsibility. There were 3 projects in collaboration with relevant agencies as follows:

### 1. Community tap water system production control and maintenance (integrated with the Fix it Center project)

#### Targets

- 9 communities had access to clean water source for consumption
- Communities gained knowledge on sustainable community waterworks management

Implementation Period 2018 - Present

#### Implementation in 2022

The Company cooperated with the vocational institutes of the eastern region to organize a project to control the production and maintenance of the community water supply system and integrated with the Fix it Centre project under the supervision of educational institutions consisting of Na Yai Am Vocational College, Chanthaburi Technical College, Trat Technical College, Ban Khai Technical College, Rayong Technical College, Maptaphut Technical College, Soi Dao Vocational College, Pattaya Technical College, Sattahip Technical College. This enabled 9 communities in Kaeng Hang Maeo District, Chanthaburi, and Phanat Nikhom District, Chon Buri with a population of 1,883 households to have access to clean water sources for consumption. The Company also organized practical training project "Sustainable Community Waterworks Management" at the Public Hall, Khao Wongkot Subdistrict Administrative Organization, Khao Wongkot Subdistrict, Kaeng Hang Meo District, Chanthaburi. There were 24 people from communities in Kaeng Hang Maeo District attended the training.

Support SDG Goals  
4.4, 6.3, 6.4, 6.6



### 2. CSR activities for communities along the raw water pipeline

#### Targets

- To open 15 community water distribution points covering more than 4,000 households to help and alleviate suffering from the drought situation in the area.
- To provide budget support to help communities along the raw water pipeline to have access to clean water sources for consumption and agriculture.
- To have no objection to the amount of raw water allocated by the government

Implementation Period 2015 - Present

#### Implementation in 2022

1. The Company supported water for consumption to communities along the pipeline during drought situation by installing 15 raw water distribution points to the village waterworks amounting to 1,758,169.60 cubic meters.
2. The Company supported projects to improve communities' well-being in terms of water utilities, society, and environment, to communities along the raw water pipeline connecting Prasae Reservoir – Khlong Yai Reservoir, Prasae – Nong Plalai, and communities around the Bang Pakong River, Chachoengsao as follows:
  - 2.1 CCTV installation project at Pump Stations of Prasae Water Transmission and Maintenance Project, Chum Saeng Subdistrict, Wang Chan District, Rayong.
  - 2.2 Contracting service project for the control of the right hand side pump station controller, Chum Saeng Subdistrict, Wang Chan District, Rayong.
  - 2.3 Weir and canal repair project, Plong Ta lam Subdistrict, Wang Chan District, Rayong.
  - 2.4 Food project for volleyball athletes at Wang Chan Witthaya School, Chum Saeng Subdistrict, Wang Chan District, Rayong.
  - 2.5 Project requesting budget support "Wang Chan people do not leave each other" Chum Saeng Subdistrict, Wang Chan District, Rayong.
  - 2.6 Dam repair project in the pump plant area, zone 2, section 3, Moo 5, Wang Chan Subdistrict, Wang Chan District, Rayong.
  - 2.7 Pipeline repair project, zone 2, section 2, Plong Ta lam Subdistrict, Wang Chan District, Rayong

Support SDG Goals 4.4, 6.3, 6.4, 6.6



### 3. Water for Communities

Supported SDG Goals 6.3, 6.4, 6.6



#### Targets

- To support community activities by providing clean water for consumption
- To relieve community difficulties from local droughts

**Implementation Period** 2000 – Present

#### Implementation in 2022

1. The Company supported drinking water for communities and government agencies to organize public activities in the amount of 382,381 liters.
2. The Company supported 3,580,000 liters of water for consumption and agriculture through its water tubes to alleviate suffering during the drought situation.



The Company has foreseen the water pollution caused by the discharge of wastewater from each sector into natural water sources. Thus, as a key driver of water allocation to different sectors, the Company joined hands with 7 Primary Educational Service Area Offices in Chachoengsao, Chon Buri, and Rayong in carrying out the canteen wastewater treatment project on pilot schools to raise awareness among the youth and nearby communities on maintenance of water sources, preservation of water resources, and optimization of water usage.

### 1. Wastewater treatment systems in pilot school canteens

Supported SDG Goals  
2.1, 4.4, 6.3, 6.6



#### Targets

- To have 14 pilot schools at diamond level (2 schools per education area) within 2023
- The dissolved oxygen (DO) in the treated water shall be higher than 4.0 mg/liter.
- To school shall be able to reuse the treated water from their canteen at 40% of wastewater.
- The school shall integrate wastewater treatment system knowledge as part of more than three core subjects.

**Implementation Period** 2014 - Present

#### Implementation in 2022

The Company cooperated with 7 Primary Educational Service Area Offices in Chachoengsao, Chon Buri, and Rayong in providing knowledge about the school canteen wastewater treatment and granting funds to further develop innovations to manage wastewater. As a result, in 2022 the number of pilot schools with a diamond level school canteen wastewater treatment system increased from 7 to 14. Such activities have improved the quality of treated water. The dissolved oxygen (DO) value was more than 4.0 mg/liter, for 1,280,240 liters of water can be reused in the amount of 833,439 liters. Treated water could be used in various school activities such as watering the plants, bio-fermented water, multi-purpose floor cleaning solution, ingredients in production of paving stones, etc., accounted for 65.10% of the effluent from canteen. In addition, fat waste from wastewater treatment system can also be processed into mosquito repellant candles, soap for washing, and compost. Moreover, the schools have transferred knowledge within the school through teaching subjects in more than 3 core subjects, and transferred knowledge to the outside and communities around the school through the publicity of information and knowledge on the school's website, meetings, seminars, networking, and field trips, etc.

## 2. Learning Promotion Projects

The Company was committed to the promotion of education and capacity building of younger generations and the communities so that they could have professional skills required for their occupations. Trainings and curriculum were developed for the youth and communities through three main projects as follows:

### 1. The Community Innovation and Maintenance of Water-air Aerator

#### Targets

- To ensure that 4 water-air aerator prototypes installed for the communities can work efficiently.
- To have 4 community innovation projects.
- To improve well-being and environment for 4 communities

**Implementation Period** 2014 - Present

#### Implementation in 2022

1. Chachoengsao Technical College built and installed aerators for water circulation using solar energy at the raw water supply pond for village waterworks at Moo 5, Sib Ed Sok Subdistrict, Ban Pho District, Chachoengsao.
2. Pattaya Technical college built and installed water and air aerators using solar energy at the Municipal Health Park, Non Plalai Subdistrict, Bang Lamung District, Chon Buri
3. Ban Khai Technical College built and installed a mini smart farm BK Tech at Wat Ang Kaew, Nong La Lok Subdistrict, Ban Khai District Rayong,
4. Rayong Technical College built and installed water treatment bicycles at the public canal in Sri Muang Park, Noen Phra Subdistrict, Mueang District, Rayong.

**Supported SDG Goals 4.4, 6.3, 6.6**



### 2. The East Water Sufficiency Economy Learning Center in Khlong Kuen District

#### Targets

- To maintain one sufficiency economy learning center with the application of water science to water management for improved agricultural productivity according to the sufficiency economy philosophy; and to support the center as a tourist spot unique to the district.
- To have more than 100 visitors/year

**Implementation Period** 2012 - Present

#### Implementation in 2022

The Sufficiency Economy Learning Center in Khlong Kuen District managed the area according to the King's science Khok Nong Na Model with following activities.:

1. Activities to nourish the soil after the harvest season have been organized; round 1 during January – April, which is the dry season, round 2 after the harvest season, during November – December of every year.
2. Activities to grow short-lived crops to generate income such as galangal, lemongrass, vegetable, basil, sweet basil, eggplant, etc. have been organized.
3. Activities to grow long-lived plant such as coconuts, mangos and bananas as the main trees that generate regular income for the learning center have been organized. Currently the learning center has 100 coconut trees and 50 mango trees and banana at the ridge area.
4. Rice planting activities have been organized, which the learning center can do rice farming twice a year, in the paddy season from July – October, and the off-season from November to January.
5. Study tour activities have been organized for government and private agencies to visit and study and participated activities in the learning center for 475 person.

**Supported SDG Goals 2.1, 2.4, 4.4, 6.3, 6.6, 8.9**



### 3. Computer training program for students with disabilities

Supported SDG Goals 4.5



#### Targets

- To provide students with disabilities with computer literacy and the ability to use computers with the success rate of 100% of the total participants.
- 10% of the training participants of each class shall be successfully hired by business organizations.

**Implementation Period** 2012 - Present

#### Implementation in 2022

1. There were 127 students with disabilities participating in the training. All of them successfully gained computer literacy and the ability to use computers.
2. The Company has followed up with students with disabilities who have passed training in 2021, 4 of them were able to work in the workplace, and 37 had private occupations (19 merchant/private occupation, 2 mechanics, and 12 farmers).

### 3. Well-being Promotion Projects

Based on its community management strategies and community outreach, the Company held a series of relations activities with communities and government agencies as a way to build a mutual understanding with the communities. The Company also listened to the comments, news and information of the communities for further improving its business processes or adjusting its CSR activities for the communities' better well-being in the future.

#### 1. Vocational trainings (reducing expenses and increasing income according to the sufficiency economy philosophy) Implementation in 2022

##### Implementation in 2022

- Total of 32 trainings were facilitated in Chachoengsao, Chon Buri, and Rayong with 1,250 participants.
- Facebook live vocational training via East Water CSR Facebook page was organized for 8 times with 196 participants.

#### 2. Friendship football matches 2022

##### Implementation in 2022

Friendship football matches were organized 6 times in:

1. Bang Pakong District and Khlong Kuen District, Chachoengsao.
2. Sri Racha District, Chon Buri
3. Pluak Daeng District, Ban Chang District, and Mueang District, Rayong

#### 3. Annual Buddhist robe offering ceremonies

##### Implementation in 2022

1. Khao Bang Phra Temple, Bang Phra Subdistrict, Si Racha District, Chon Buri
2. Ban Kluay Temple, Khlong Kuen Subdistrict, Khlong Kuen District, Chachoengsao.

#### 4. Supporting budget for public activities

##### Implementation in 2022

1. A donation budget was allocated to help flood victims
2. A budget is allocated to support repairing of the building of Ban Plong Ta lam Subdistrict Health Promoting Hospital
3. The Company supported the organizing of music festivals and seafood festival, Ban Phe – Koh Samed.
4. The Company supported local tradition activities.
5. The Company supported education, sports, and religion.



### 30 Years of East Water

Returning fertility to the forest, bringing smiles to everyone at Ban Nong Muang Community, Wang Chan District, Rayong.

From the past to present, it has been more than 5 years that the Company has collaborated with the network of the five provinces bordering community forest in the eastern region and Ban Nong Muang community organized a project to maintain and restore Ban Nong Muang Community Forest with participation in accordance with “Pracha Rath” approach. The objectives were to create humidity, fertility, and maintain balance of the upstream forest ecosystem in order to balance the water cycle, as well as jointly passing on the concept of water resource conservation for endless water utilization.”

In 2022, on the occasion of the 30th anniversary, the Company organized the “30 Years of East Water, Returning the Green Forest and Sustainable Youth Development” activities with the Company’s stakeholders visiting the area to do activities to increase Ban Nong Muang Community Forest. The activities emphasized on building model communities from upstream to downstream towards cooperation to improve the community’s well-being and environment sustainably. It also cultivated awareness among youths about the preservation of water sources through activities such as upstream forest planning, weir making activities, donating fish species to water sources, rope climbing bases climbing activities, repairing and painting of playgrounds activities, and painting school buildings and walkway activity, etc.



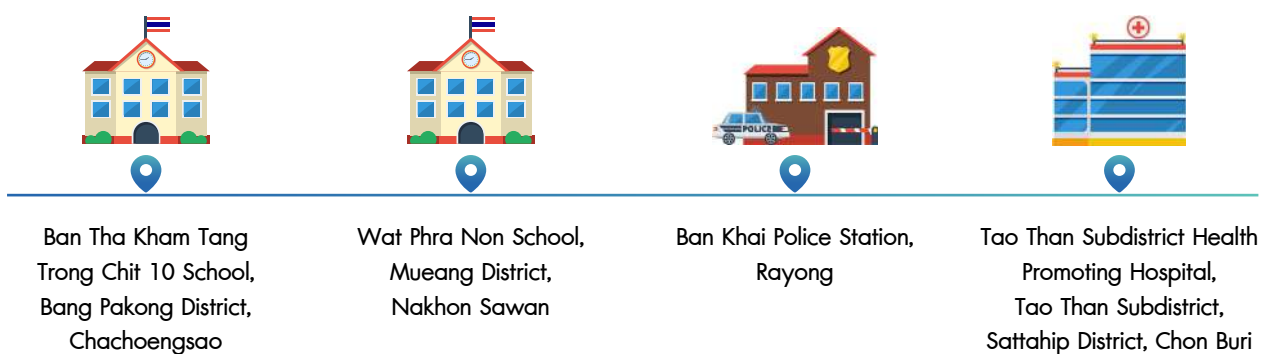
## Social and Environment Activities of UU PCL.

UU PCL. have given importance to business operations along with social responsibility and local communities. In 2022, the COVID-19 situation has subsided, but the UU PCL. still considered safety and carried out various activities under the safety measures announced by the government. The activities were divided into 4 areas as follows:

1. Education Program: This was part of the “Water Loss Inspectors” with a focus on building the youth’s awareness about the environmental conservation and promoting students and learners’ knowledge about water and environment through class and outside class activities. The students and learners would learn from hands-on practices and gained awareness about water and environmental conservation. Water supply entities in the areas were ready to be a local water learning center. This helped build up good relationships between EWG and the communities. In 2022, there were activities in collaboration with different local schools as follows:

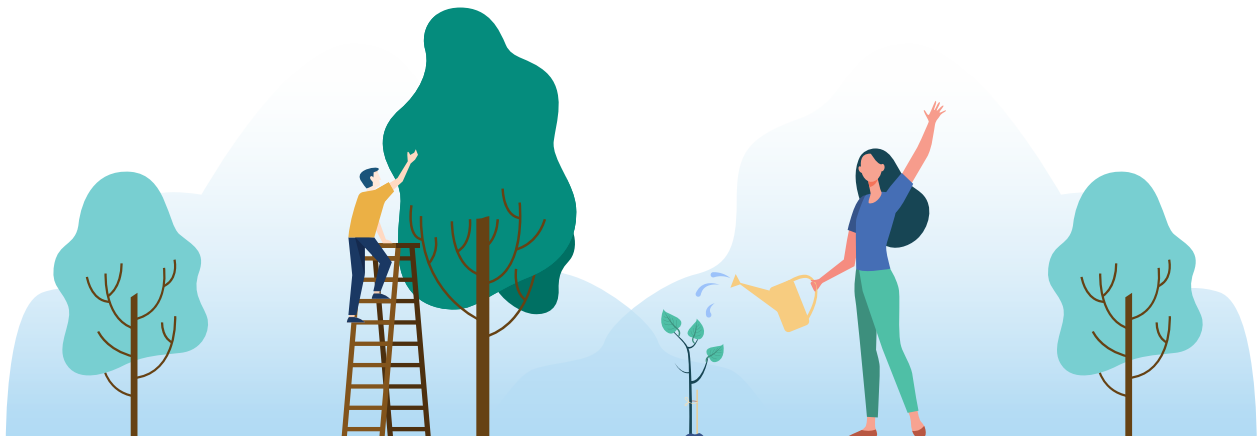


2. Community Support Program: This was part of the “Rak Tuk Yot Lot Nam Soon Sia (Saving All Drops of Water to Reduce Water Loss) project where a team of professional and experienced technicians from the UU PCL. helped renovate tap water system to be in a ready-to-use condition. In 2022, the UU PCL. have extended the scope of operations to cover other government agencies apart from schools. The activities were held with different local agencies as follows:





3. Environmental Program: There were many dimensions of activities with the aim to reducing global warming, increasing green zones in communities and residential areas, restoring a balance in nature and environment, raising awareness and a sense of appreciation and protection of natural resources, and promoting natural conservation. In 2022, despite the COVID-19 pandemic, the UU PCL. still implemented activities in line with the situation as follows:



UU Sang Pa Rak Ton Nam (Buiding and Conserving Upgstream Forest) Project for 2022 at Pluak Daeng District, Rayong.

Improvement and Development Project of Somdet Phra Srinagarindra Park, Mueang District, Rayong.

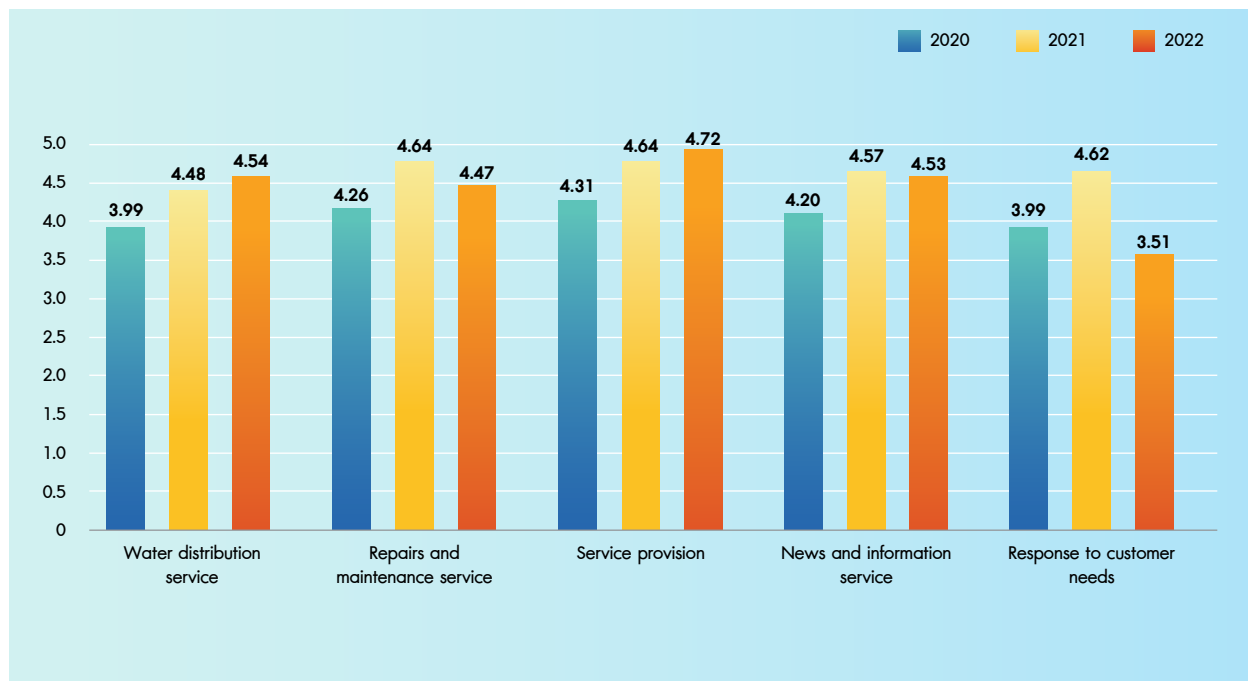
Conservation, Development, and Increase of Green Space Promotion Project, Office of Natural Resources at Ban Bueng Ton Chan School, Ban Khai District, Rayong.

4. Charitable Program: This was under the guidelines for supporting public activities of UU PCL. under the specified budget framework to be completely correct and in accordance with the regulations of the UU PCL. and the principles of good corporate governance.

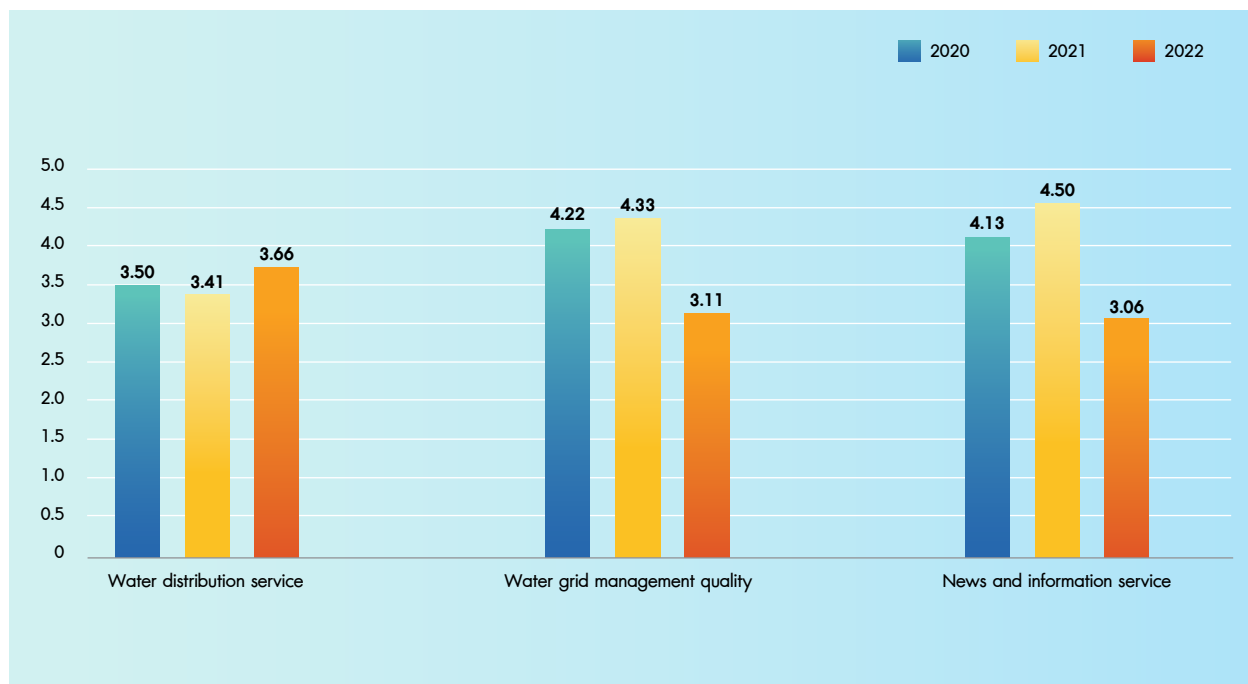
In addition, the UU PCL. have encouraged executives and employees to volunteer in carrying out activities that are of public benefit, encouraging them to do good deeds and create a good sense of social and community responsibility. The UU PCL. had organized activities such as providing opportunity for employees to participate in the donations and provide assistance to the underprivileged or victims, and participating in the distribution of drinking water in various important government activities, etc.

## ANNEX

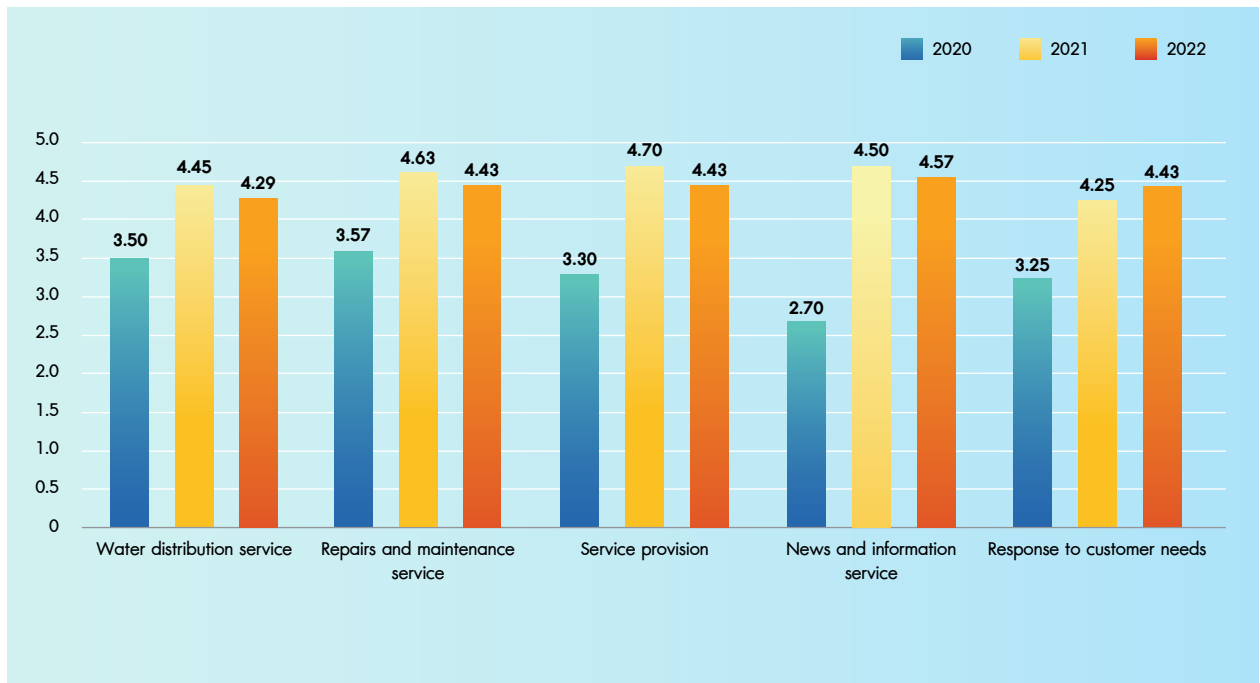
Comparison of satisfaction level of raw water customers (direct) in each aspect for 2020-2022



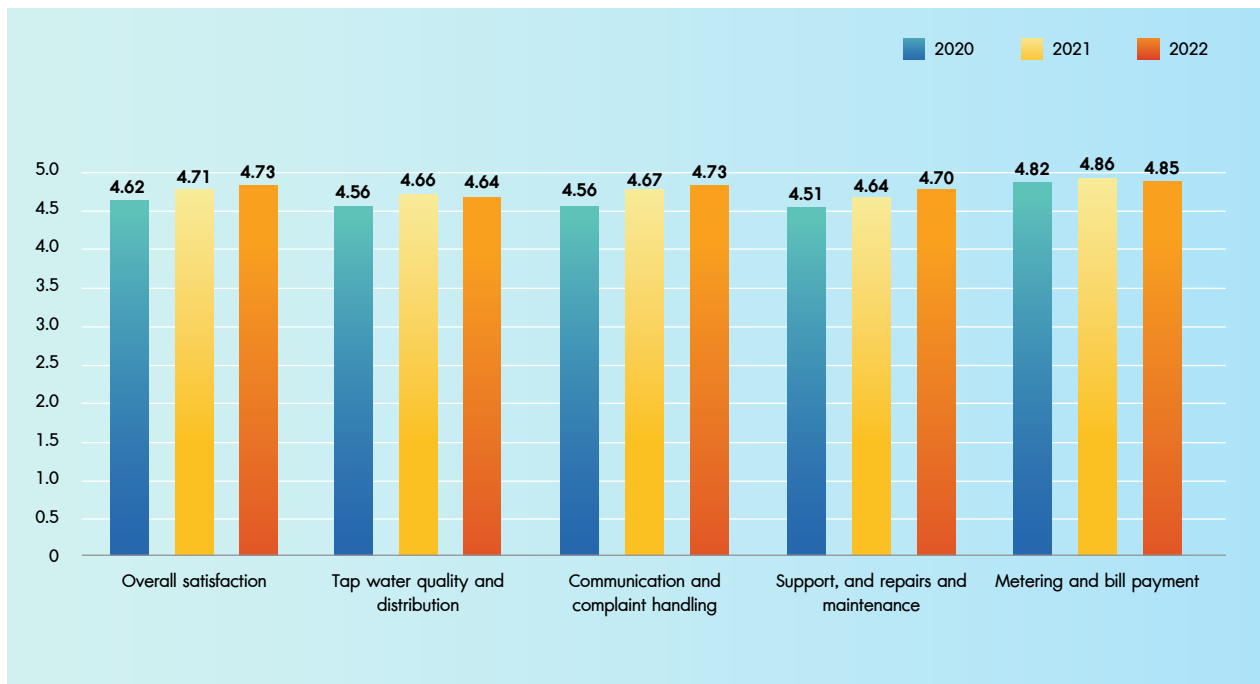
Comparison of satisfaction level of raw water customers (indirect) in each aspect for 2020-2022



Comparison of satisfaction level of total water solution customers in each aspect for 2020-2022



Comparison of satisfaction level of tap water customers in each aspect for 2020-2022



## Table of Main Water Sources Utilized by the Company in 2021 - 2022

(Disclosure 303-1, 303-3, 303-5:2018)

Surface water	Importance of Water Sources to Local Communities	Storage Capacity	
Volume of Water		10 <sup>3</sup> million liters	
Rayong areas			
1. Prasae Reservoir	<ul style="list-style-type: none"> <li>To supply water to plantation areas in Prasae project</li> <li>To prevent saltwater intrusion</li> <li>To prevent floods in Klang District, Rayong</li> <li>To reserve raw water for eastern seaboard industrial estate</li> <li>Volume of water flow into the reservoir was 203.46 million cubic meters. (Source: Prasae Water Distribution and Maintenance project)</li> </ul>	248.00	
2. Nong Plalai Reservoir	<ul style="list-style-type: none"> <li>To supply water to plantation areas in the Ban Khai Irrigation project</li> <li>To prevent floods in Rayong</li> <li>To supply water for consumption and industrial purposes with a future plan to supply water to Sattahip areas for industrial area expansion projects</li> <li>To serve as fish breeding grounds and areas for tourism and recreation</li> <li>Volume of water flow into the reservoir was 279.62 million cubic meters</li> </ul>	163.75	
3. Dok Krai Reservoir	<ul style="list-style-type: none"> <li>To supply water to plantation areas in the Baan Kai Irrigation project</li> <li>To prevent floods in Rayong</li> <li>To supply water for consumption and industrial purposes</li> <li>To serve as fish breeding grounds and areas for tourism and recreation</li> <li>Volume of water flow into the reservoir was 129.54 million cubic meters. (Source: Royal Irrigation Department)</li> </ul>	79.41	
4. Khlong Thab Ma, Rayong River	<ul style="list-style-type: none"> <li>To manage water supplies to prevent droughts and floods</li> <li>To pump water to Thab Ma pond for reserve purposes</li> </ul>	12	
Chon Buri areas			
5. Bang Phra Reservoir	<ul style="list-style-type: none"> <li>To support agriculture in 8,500 Rai of land</li> <li>To supply water for consumption and industrial purposes</li> <li>To serve as fish breeding grounds and areas for tourism and recreation</li> <li>Volume of water flow into the reservoir was 55.40 million cubic meters. (Source: Royal Irrigation Department)</li> </ul>	117.0	
6. Nong Kho Reservoir	<ul style="list-style-type: none"> <li>To supply water to current creeks for agriculture in 7,500 Rai of land</li> <li>To supply water for consumption and industrial purposes</li> <li>To serve as fish breeding grounds and areas for tourism and recreation</li> <li>Volume of water flow into the reservoir was 30.46 million cubic meters. (Source: Royal Irrigation Department)</li> </ul>	21.40	
Chachoengsao areas			
7. Bang Pakong River (Water Stress) Source: <a href="https://www.wri.org/our-work/project/aqueduct/">https://www.wri.org/our-work/project/aqueduct/</a>	<ul style="list-style-type: none"> <li>To maintain ecosystems</li> <li>To deter the intrusion of saltwater</li> <li>To serve as a water source for consumption, agricultural, and industrial purposes</li> <li>Average volume of natural water for the whole year was 3,344 million cubic meters. (Source: Large Scale Project Office, Royal Irrigation Department)</li> </ul>	-	
8. Private water sources (Water Stress) Sources: <a href="https://www.wri.org/our-work/project/aqueduct/">https://www.wri.org/our-work/project/aqueduct/</a>		-	
9. Rainwater from Samnak Bok Pond			
Total			

	Volume of Water under Management			Total Dissolved Solids ( $\leq$ 1,000 mg/liter)	Total Dissolved Solids ( $>$ 1,000 mg/liter)	Remarks
	Allocated Water (as per Permit)	Pumped Water 2021	Pumped Water 2022			
	10 <sup>3</sup> million liters	10 <sup>3</sup> million liters	10 <sup>3</sup> million liters	10 <sup>3</sup> million liters	10 <sup>3</sup> million liters	10 <sup>3</sup> million liters is equal to one million cubic meters.
	110	23.55	11.94	11.94	0	During 2021-2022, the Company used water from Prasae-Khlong Yai pipeline of 9.07 million cubic meters and from Prasae-Nong Plalai pipeline of 2.66 million cubic meters.
	120.00	155.04	141.73	141.73	0	During 2021-2022, the volume of water pumped from the Nong Plalai Reservoir exceeded the permitted limit since it was the management of the amount of overall water allowed in Rayong area, i.e., the total water used of Dok Krai Reservoir and Nong Plalai Reservoir did not exceed 236 million cubic meters.
	116.00	78.94	82.78	82.78	0	The permitted water volume of 116 million cubic meters was more than the reservoir storage capacity as the water volume flow into the reservoir during the year was included.
	0	16.41	9.29	9.29	0	
	8.00	0	7.30	7.30	0	The Company obtained a written permit for water consumption from Bang Phra reservoir for 8.00 million cubic meters. The Company also used water deposited in Bang Pakong River.
	16.70	11.41	6.93	6.93	0	
	27.00	17.95	7.29	7.29	0	The Company had water pumping operations only in the rainy season according to criteria as mutually agreed upon by water users and Chachoengsao provincial authorities. A portion of water was diverted to Bang Phra reservoir for use during the dry season for Chachoengsao and Chonburi areas. In 2022, the Company pumped water from Bang Pakong River for distribution to Chachoengsao, and reserved the remaining water totaling 5.67 million cubic meters in Bang Phra reservoir.
	12.00	7.48	8.21	8.21	0	The Company distributed water of 8.21 million cubic meters from private water sources to the areas in Chachoengsao and Chon Buri in the drought season in 2022.
	0	0.23	0.23	0.23	0	This portion accounted for 3.78% of the total water in the Samnak Bok pond and was calculated based on a monthly average rainfall level x water surface area (Source: Average water rainfall levels from the Meteorological Department).
	<b>397.70</b>	<b>311.01</b>	<b>275.70</b>	<b>275.70</b>	<b>0</b>	

## Table of Water Volumes in Water Sources Used by Subsidiaries for Tap Water Production in 2022

(Disclosure 303-3:2018)

Raw Water Provider	Type of Water Source	Waterworks Entity	Description	Water Volume (cubic meter)
Contract Parties	Surface Water	Chachoengsao, Bang Pakong, Chon Buri, Rayong, Bo Win, Sattahip, Lakchai Muangyang, Nakhon Sawan	Water volume used for tap water production	97,302,045.00
			Water volume used for tap water production; TDS≤1,000 mg/l	92,131,122.00
			Water volume used for tap water production; TDS>1,000 mg/l	5,170,923.00
			Volume of Tap water distributed from the production system	94,489,290.50
			Volume of non-revenue water in the production system	2,812,754.50
The Subsidiaries	Surface Water	Nong Kham, Ratchaburi, Hua Ro	Water volume used for tap water production	13,541,378.00
			Water volume used for tap water production; TDS≤1,000 mg/l	13,541,378.00
			Water volume used for tap water production; TDS>1,000 mg/l	0
			Volume of Tap water distributed from the production system	13,537,085.00
			Volume of non-revenue water in the production system	4,293.00

### Remarks :

- The Rayong Waterworks used TS value of raw water instead of TDS value
- The Chonburi Waterworks did not check/measure TDS value. They used surface water value instead. This entity was in the same area as the Bo Win Waterworks with the TDS value of raw water not exceeding 1,000 ppm. Thus, it was considered that, based on qualities of raw water, the raw water in Chonburi came from the same source as that in Bo Win. Their TDS value should not exceed 1,000 ppm.
- The Hua Ro Waterworks did not check/measure TDS value. They used surface water value instead. This entity was in the same area as the Nakhon Sawan Waterworks with the TDS value of raw water not exceeding 1,000 ppm. Thus, it was considered that, based on qualities of raw water, the raw water in Hua Ro came from the same source as that in Nakhon Sawan. Their TDS value should not exceed 1,000 ppm.
- For Ratchaburi Waterworks, there was a problem of incorrect meter readings of raw water. Later on, the problem was fixed. Relevant values were calibrated and reset, and normal operations resumed.

## Company's Employee Information

(Disclosure 2-7:2021, 405-1)

Employee means a person who is employed by the Company as a permanent and contract employee. No temporary employee, daily employee, and part-time employee are hired

Details	2019		2020		2021		2022	
	Number (person)	%	Number (person)	%	Number (person)	%	Number (person)	%
Total employees	229	100	236	100	249	100	230	100
By type of employment								
Permanent employees	228	99.56	232	98.31	245	98.39	227	98.70
Contract employees	1	0.44	4	1.69	4	1.61	3	1.30
By gender								
• Male	117	51.09	124	52.54	133	53.41	123	53.48
• Female	112	48.91	112	47.46	116	46.59	107	46.52
By position level								
Executive	20	8.73	21	8.90	22	8.84	18	7.83
• Male	10	4.37	11	4.66	12	4.82	10	4.35
• Female	10	4.37	10	4.24	10	4.02	8	3.48
Supervisory	33	14.41	33	13.98	32	12.85	34	14.78
• Male	13	5.68	15	6.36	15	6.02	20	8.70
• Female	20	8.73	18	7.63	17	6.83	14	6.09
Operational	176	76.86	182	77.12	195	78.31	178	77.39
• Male	94	41.05	98	41.53	106	42.57	93	40.43
• Female	82	35.81	84	35.59	89	35.74	85	36.96
By age								
Less than 30 years	36	15.72	34	14.41	38	15.26	25	10.87
Between 30-50 years	173	75.55	179	75.85	182	73.09	175	76.09
More than 50 years	20	8.73	23	9.75	29	11.65	30	13.04
By region								
Central (Bangkok)	150	65.50	144	61.02	144	57.83	130	56.52
Eastern (Chachoengsao, Chon Buri, Rayong)	79	34.50	92	38.98	105	42.17	100	43.48



## Employment Rates of New Hires

(Disclosure 401-1)

Details	2019		2020		2021		2022	
	Number (person)	%	Number (person)	%	Number (person)	%	Number (person)	%
Employment rates of new hires	23	10.04	20	8.47	31	12.45	15	6.52
By gender								
• Male	17	7.42	12	5.08	25	10.04	10	4.35
• Female	6	2.62	8	3.39	6	2.41	5	2.17
By age								
Less than 30 years	10	4.37	5	2.12	18	7.23	2	0.87
Between 30-50 years	13	5.68	13	5.51	12	4.82	10	4.35
More than 50 years	0	0	2	0.85	1	0.40	3	1.30
By region								
Central (Bangkok)	13	5.68	5	2.12	13	5.22	10	4.35
Eastern (Rayong, Chon Buri, Chachoengsao)	10	4.37	15	6.36	18	7.23	5	2.17

## Employee Attrition Rates

(Disclosure 401-1)

Details	2019		2020		2021		2022	
	Number (person)	%	Number (person)	%	Number (person)	%	Number (person)	%
Employee attrition rate	15	6.55	13	5.51	18	7.23	34	14.78
By gender								
• Male	7	3.06	5	2.12	14	5.62	20	8.70
• Female	8	3.49	8	3.39	4	1.61	14	6.09
By age								
Less than 30 years	2	0.87	2	0.85	3	1.20	8	3.48
Between 30-50 years	10	4.37	7	2.97	13	5.22	19	8.26
More than 50 years	3	1.31	4	1.69	2	0.80	7	3.04
By region								
Central (Bangkok)	10	4.52	13	5.68	11	4.66	22	9.57
Eastern (Rayong, Chon Buri, Chachoengsao)	5	2.26	2	0.87	2	0.85	12	5.22



## Company's Outsourced Worker Information

(Disclosure 2-8:2021)

Outsourced worker means a person who the Company employs through contract party by the type of employment contract.

Year 2022	Total	Male	Female	Contract Type
<b>Total outsourced workers</b>				
<b>Labor contractor</b>				
Central (Bangkok)	22	8	14	Yearly contract
Eastern (Rayong, Chon Buri, Chachoengsao)	43	39	4	Yearly contract
<b>Maid</b>				
Central (Bangkok)	21	0	21	2-year contract
Eastern (Rayong, Chon Buri, Chachoengsao)	17	0	17	2-year contract
<b>Gardener</b>				
Central (Bangkok)	1	1	0	2-year contract
Eastern (Rayong, Chon Buri, Chachoengsao)	40	19	21	Yearly contract
<b>Security guard</b>				
Central (Bangkok)	28	23	5	2-year contract
Eastern (Rayong, Chon Buri, Chachoengsao)	70	70	0	Yearly contract
<b>Building management</b>				
Central (Bangkok)	15	11	4	2-year contract
<b>Project contractors</b>				
Industrial Water Production Project, Amata City Industrial Estate	15	15	0	Project contract
Nong Kho 2 Pipeline Project	4	4	0	Project contract
U-Tapao Project	90	90	0	Project contract
Raw Water Pipeline Khlong Luang – Chon Buri Construction Project	57	57	0	Project contract
Samnak Bok Pond improvement	37	37	0	Project contract

(Disclosure 2-7:2021, 405-1)

Subsidiaries' employee means a person who is employed by the Company as a permanent and contract employee. No temporary employee, daily employee, and part-time employee are hired.

[illegible]



(Disclosure 401-1)

[illegible]

## Subsidiaries' Maternity Leave Rates

(Disclosure 401-3:2016)

Details	2019		2020		2021		2022	
	Number (Person)	%	Number (Person)	%	Number (Person)	%	Number (Person)	%
Total number of entitled employees	N/A	N/A	N/A	N/A	N/A	N/A	54	100
Employees taking maternity leave	N/A	N/A	N/A	N/A	N/A	N/A	2	1.41
Employees returning to work after taking maternity leave*	N/A	N/A	N/A	N/A	N/A	N/A	2	100
Total number of employees returning to work after taking maternity leave and worked with the Company for 12 months**	N/A	N/A	N/A	N/A	N/A	N/A	2	100

Remark : \* Employees returning to work after taking maternity leave

$$\text{Number of employees returning to work} = \frac{\text{Total number of employees returning to work after taking maternity leave}}{\text{Total number of employees due to return to work after taking maternity leave}} \times 100$$

\*\* Total number of employees returning to work after taking maternity leave and worked with the Company for 12 months

$$\text{Rate of Return} = \frac{\text{Total number of employees returning to work for 12 months after taking maternity leave}}{\text{Total number of employees returning to work after taking maternity leave}} \times 100$$

## Subsidiaries' Employee Remuneration Proportion (Female : Male)

(Disclosure 405-2:2016)

Details	2019		2020		2021		2022	
	Ratio							
	Female	Male	Female	Male	Female	Male	Female	Male
By age								
Less than 30 years	N/A	N/A	N/A	N/A	N/A	N/A	1	0.89
Between 30-50 years	N/A	N/A	N/A	N/A	N/A	N/A	1	0.92
More than 50 years	N/A	N/A	N/A	N/A	N/A	N/A	1	0.38
By position level								
Executive	N/A	N/A	N/A	N/A	N/A	N/A	1	0.96
Supervisory	N/A	N/A	N/A	N/A	N/A	N/A	1	0.85
Operational	N/A	N/A	N/A	N/A	N/A	N/A	1	0.96
By region								
Central (Bangkok, Nakhon Sawan, Ayutthaya, Phitsanulok)	N/A	N/A	N/A	N/A	N/A	N/A	1	0.96
Western (Ratchaburi)	N/A	N/A	N/A	N/A	N/A	N/A	1	0.84
Eastern (Rayong, Chon Buri, Chachoengsao)	N/A	N/A	N/A	N/A	N/A	N/A	1	1.26



## Subsidiaries' Outsourced Worker Information

(Disclosure 2-8:2021)

Outsourced worker means a person who the subsidiaries employ through contract party by the type of employment contract.

Year 2022	Total	Male	Female	Contract Type
<b>Total outsourced workers</b>				
<b>Labor contractor</b>				
Central (Bangkok, Nakhon Sawan, Ayutthaya, Phitsanulok)	26	22	4	Yearly contract
Western (Ratchaburi)	19	18	1	Yearly contract
Eastern (Rayong, Chon Buri, Chachoengsao)	156	138	18	Yearly contract
<b>Maid</b>				
Central (Nakhon Sawan, Phitsanulok)	2	0	2	2-year contract
Western (Ratchaburi)	3	0	3	2-year contract
Eastern(Rayong, Chon Buri, Chachoengsao)	9	0	9	2-year contract
<b>Gardener</b>				
Central (Nakhon Sawan)	1	1	0	2-year contract
<b>Security guard</b>				
Central (Nakhon Sawan)	4	4	0	Yearly contract
Western (Ratchaburi)	8	8	0	Yearly contract
Eastern (Rayong, Chon Buri, Chachoengsao)	38	38	0	Yearly contract
<b>Project contractors</b>				
Factory cleaning Chachoengsao	5	5	0	2-year contract
Factory cleaning Bang Pakong	5	5	0	2-year contract
Factory cleaning Rayong	4	4	0	2-year contract
Factory cleaning Sattahip	2	2	0	Yearly contract
General workers Ratchaburi	2	2	0	Yearly contract

**Total Accidents-Company's Employees** (Disclosure 403-8, 403-9, 403-10:2018)

Scope of Reporting		2019			
		Male	Female	Total	
Number of employees	Head Office (person)	55	95	150	
	Operating area (person)	62	17	79	
	<b>Total (person)</b>	<b>117</b>	<b>112</b>	<b>229</b>	
Total normal working days of employees	Head Office (day)	13,365	23,085	36,450	
	Operating area (day)	15,066	4,131	19,197	
	<b>Total (day)</b>	<b>28,431</b>	<b>27,216</b>	<b>55,647</b>	
Total working hours of employees	Head Office (hour)	100,167.00	170,702.00	270,869.00	
	Operating area (hour)	119,581.00	33,280.00	152,861.00	
	<b>Total (hour)</b>	<b>219,748.00</b>	<b>203,982.00</b>	<b>423,730.00</b>	
Number of incidents with injured employees	<b>Total (time/year)</b>	<b>1</b>	<b>0</b>	<b>1</b>	
Number of incidents with injured employees to the point of losing work (including death)	<b>Total (time/year)</b>	<b>1</b>	<b>0</b>	<b>1</b>	
Number of injured employees by degrees of severity	• First Aids (person/year)	0	0	0	
	• Recordable work-related injuries (person/year)	1	0	1	
	• High-consequence (person/year)	0	0	0	
	• The number of fatalities as a result of work-related injury (person/year)	0	0	0	
	<b>Total leave days taken by injured employees (day/year)</b>	<b>26</b>	<b>0</b>	<b>26</b>	
Accident rates	Injury Rate: IR (time/one million working hours)	4.55	0	2.36	
	Injury Frequency Rate: IFR (time/one million working hours)	4.55	0	2.36	
	Lost Time Injury Frequency Rate: LTIFR (person/one million working hours)	4.55	0	2.36	
	Rate of fatalities as a result of work-related injury (person/one million working hours)	0	0	0	
	Lost Day Injury Rate: LDIR (day/one million working hours)	118.32	0	61.36	
Total sick leave hours by location	Head Office (hour)	2,178.48	4,414.48	6,592.96	
	Operating area (hour)	2,223.52	431.52	2,655.04	
	<b>Total (hour)</b>	<b>4,402.00</b>	<b>4,846.00</b>	<b>9,248.00</b>	
Total sick leave hours by type	General sick leave (hour)	4,194.00	4,846.00	9,040.00	
	Work accident-related sick leave (hour)	208.00	0	208.00	
	Work disease-related sick leave (hour)	0	0	0	
Absentee Rate (AR) calculated from sick leave taken by employees only	Head Office	2.04	2.39	2.26	
	Operating area	1.84	1.31	1.73	
Number of work-related diseases		0	0	0	
Occupational Disease Rate: ODR (person/one million working hours)		0	0	0	



## Number and Severity Levels of Accidents – Company's Contractors and Outsourced Workers

Scope of Reporting		2019			
		Male	Female	Total	
Number of working hours of employees	Head Office (hour)	140,388.00	80,262.00	220,650.00	
	Operating area construction project (hour)	959,687.00	41,468.00	1,001,155.00	
	<b>Total (hour/year)</b>	<b>1,100,075.00</b>	<b>121,730.00</b>	<b>1,221,805.00</b>	
Number of incidents with injured employees	Head Office (time/year)	0	0	0	
	Operating area construction project (time/year)	0	0	0	
	<b>Total (time/year)</b>	<b>0</b>	<b>0</b>	<b>0</b>	
Number of incidents with injured employees to the point of losing work (including death)	Head Office (time/year)	0	0	0	
	Operating area construction project (time/year)	0	0	0	
	<b>Total (time/year)</b>	<b>0</b>	<b>0</b>	<b>0</b>	
Number of injured employees by degrees of severity	• First Aids (person/year)	0	0	0	
	• Recordable work-related injuries (person/year)	0	0	0	
	• High-consequence (person/year)	0	0	0	
	• The number of fatalities as a result of work-related injury (person/year)	0	0	0	
	<b>Total leave days taken by injured employees (day/year)</b>	<b>0</b>	<b>0</b>	<b>0</b>	
Accident rates	Injury Rate: IR (time/one million working hours)	0	0	0	
	Injury Frequency Rate: IFR (time/one million working hours)	0	0	0	
	Lost Time Injury Frequency Rate: LTIFR (person/one million working hours)	0	0	0	
	Rate of fatalities as a result of work-related injury (person/one million working hours)	0	0	0	
	Lost Day Injury Rate: LDIR (day/one million working hours)	0	0	0	

## Company's Contractors and Outsourced Workers

	2020			2021			2022		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
	140,548.00	80,072.00	220,620.00	133,092.00	89,934.00	223,026.00	158,055.04	117,538.50	275,593.54
	1,868,395.49	39,572.00	1,907,967.49	1,878,700.42	91,101.08	1,969,801.50	1,855,738.25	93,314.58	1,949,052.83
	2,008,943.49	119,644.00	2,128,587.49	2,011,792.42	181,035.08	2,192,827.50	2,013,793.29	210,853.08	2,224,646.37
	0	0	0	0	0	0	1	0	1
	1	0	1	1	0	1	0	0	0
	1	0	1	1	0	1	1	0	1
	0	0	0	0	0	0	1	0	1
	1	0	1	1	0	1	0	0	0
	1	0	1	1	0	1	1	0	1
	0	0	0	0	0	0	0	0	0
	1	0	1	0	0	0	1	0	1
	0	0	0	0	0	0	0	0	0
	0	0	0	1	0	1	0	0	0
	30	0	30	6,000	0	6,000	2	0	2
	0.50	0	0.47	0.50	0	0.46	0.50	0	0.45
	0.50	0	0.47	0.50	0	0.46	0.50	0	0.45
	0.50	0	0.47	0.50	0	0.46	0.50	0	0.45
	0	0	0	0.50	0	0.46	0	0	0
	14.93	0	14.09	2,982.42	0	2,736.19	0.99	0	0.90

## Total Accidents-Subsidiaries' Employees

Scope of Reporting	
Number of employees	Head Office (person)
	Operating area (person)
	<b>Total (person)</b>
Total normal working days of employees	Head Office (day)
	Operating area (day)
	<b>Total (day)</b>
Total working hours of employees	Head Office (hour)
	Operating area (hour)
	<b>Total (hour)</b>
Number of incidents with injured employees	<b>Total (time/year)</b>
Number of incidents with injured employees to the point of losing work (including death)	<b>Total (time/year)</b>
Number of injured employees by degrees of severity	• First Aids (person/year)
	• Recordable work-related injuries (person/year)
	• High-consequence (person/year)
	• The number of fatalities as a result of work-related injury (person/year)
	<b>Total leave days taken by injured employees (day/year)</b>
Accident rates	Injury Rate: IR (time/one million working hours)
	Injury Frequency Rate: IFR (time/one million working hours)
	Lost Time Injury Frequency Rate: LTIFR (person/one million working hours)
	Rate of fatalities as a result of work-related injury (person/one million working hours)
	Lost Day Injury Rate: LDIR (day/one million working hours)
Total sick leave hours by location	Head Office (hour)
	Operating area (hour)
	<b>Total (hour)</b>
Total sick leave hours by type	Injury Rate: IR (time/one million working hours)
	Injury Frequency Rate: IFR (time/one million working hours)
	Lost Time Injury Frequency Rate: LTIFR (person/one million working hours)
Absentee Rate (AR) calculated from sick leave taken by employees only	Rate of fatalities as a result of work-related injury (person/one million working hours)
	Lost Day Injury Rate: LDIR (day/one million working hours)
<b>Number of work-related diseases</b>	
<b>Occupational Disease Rate: ODR (person/one million working hours)</b>	

	Subsidiaries' Employees					
	2021			2022		
	Male	Female	Total	Male	Female	Total
	25	30	55	24	30	54
	61	25	86	62	25	87
	86	55	141	86	55	141
	6,025	7,230	13,255	5,784	7,230	13,014
	14,701	6,025	20,726	14,942	6,025	20,967
	20,726	13,255	33,981	20,726	13,255	33,981
	46,742.70	52,691.40	99,434.10	45,611.70	55,241.60	100,853.30
	118,780.30	42,668.78	161,449.08	115,555.21	45,925.70	161,480.91
	165,523.00	95,360.18	260,883.18	161,166.91	101,167.30	262,334.21
	0	1	1	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	1	1	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	10.49	3.83	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	1,481.00	929.00	2,410.00	857.30	1,166.20	2,023.50
	72.00	0	72.00	2,813.10	1,711.80	4,524.90
	1,553.00	929.00	2,482.00	3,670.40	2,878.00	6,548.40
	1,553.00	929.00	2,482.00	3,670.40	2,878.00	6,548.40
	0	0	0	0	0	0
	0	0	0	0	0	0
	3.07	1.61	2.27	1.85	2.02	1.94
	0.06	0	0.04	2.35	3.55	2.70
	0	0	0	0	0	0
	0	0	0	0	0	0



## Number and Severity Levels of Accidents – Subsidiaries' Contractors and Outsourced Workers

Scope of Reporting	
Number of working hours of employees	Head Office (hour)
	Operating area construction project (hour)
	<b>Total (hour/year)</b>
Number of incidents with injured employees	Head Office (time/year)
	Operating area construction project (time/year)
	<b>Total (time/year)</b>
Number of incidents with injured employees to the point of losing work (including death)	<b>Total (time/year)</b>
Number of injured employees by degrees of severity	• First Aids (person/year)
	• Recordable work-related injuries (person/year)
	• High-consequence (person/year)
	• The number of fatalities as a result of work-related injury (person/year)
	<b>Total leave days taken by injured employees (day/year)</b>
Accident rates	Injury Rate: IR (time/one million working hours)
	Injury Frequency Rate: IFR (time/one million working hours)
	Lost Time Injury Frequency Rate: LTIFR (person/one million working hours)
	Rate of fatalities as a result of work-related injury (person/one million working hours)
	Lost Day Injury Rate: LDIR (day/one million working hours)

	Subsidiaries' contractors and outsourced workers					
	2021			2022		
	Male	Female	Total	Male	Female	Total
	2,605.50	3,368.00	5,973.50	990.50	2,961.50	3,952.00
	467,013.99	41,448.00	508,461.99	457,077.10	41,249.70	498,326.80
	469,619.49	44,816.00	514,435.49	458,067.60	44,211.20	502,278.80
	0	0	0	0	0	0
	1	0	1	0	0	0
	1	0	1	0	0	0
	0	0	1	0	0	0
	0	0	0	0	0	0
	1	0	1	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	1	0	1	0	0	0
	2.13	0	1.94	0	0	0
	0	0	1.94	0	0	0
	2.13	0	1.94	0	0	0
	0	0	0	0	0	0
	2.13	0	1.94	0	0	0

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	2-25	Processes to remediate negative impacts		36			
	2-26	Mechanisms for seeking advice and raising concerns		36			
	2-27	Compliance with laws and regulations	10, 69				
	2-28	Membership associations		13			
	Stakeholder engagement						
	2-29	Approach to stakeholder engagement		14, 20			
2-30	Collective bargaining agreements		83				
Material Topics							
GRI 200 Economic Standard Series							
GRI 3 Material Topics 2021	ECONOMIC PERFORMANCE						
	3-1	Process to determine material topics		57-60			
	3-2	List of material topics					
	3-3	Management of material topics		29			
GRI 201 Economic Performance 2016	201-1	Direct economic value generated and distributed		31	Income and operating expenses of the East Water Group (EWG).		
	201-2	Financial implications and other risks and opportunities due to climate change	58	56			
	201-3	Defined benefit plan obligations and other retirement plans	87, 89	31			
	201-4	Financial assistance received from government		10, 31			
GRI 3 Material Topics 2021	INDIRECT ECONOMIC IMPACTS						
	3-1	Process to determine material topics		100-105			
	3-2	List of material topics					
	3-3	Management of material topics		29			
GRI 203 Indirect Economic Impacts 2016	203-1	Infrastructure investments and services supported		31, 98	Public activities for the benefit of society, communities and the environment that are related to the Company’s business operations.		
	203-2	Significant indirect economic impacts		44			

GRI Standard	Disclosure		Page number		Reporting Scope	Omission Note	External Assurance
			AR	SR			
GRI 3 Material Topics 2021	ANTI-CORRUPTION						
	3-1	Process to determine material topics		32-39,			
	3-2	List of material topics		44			
	3-3	Management of material topics		29			
GRI 205 Anti-Corruption 2016	205-1	Operations assessed for risks related to corruption		41			
	205-2	Communication and training about anti-corruption policies and procedures		32, 42	The East Water Group’s Permanent employees and contracted employees as the policy takers, and the Group’s suppliers as it is an important issue that more than one stakeholder groups are interested in.		
	205-3	Confirmed incidents of corruption and actions taken		34			
Material Topics							
GRI 300 Environmental Standard Series							
GRI 3 Material Topics 2021	ENERGY						
	3-1	Process to determine material topics		56,			
	3-2	List of material topics		66-70			
	3-3	Management of material topics		29			
GRI 302 Energy 2016	302-1	Energy consumption within the organization		65			
	302-2	Energy consumption outside of the organization		65			
	302-3	Energy intensity		63, 68	The operating areas in 3 provinces i.e., Rayong, Chon Buri, and Chachoengsao because the Company’s core processes cover those areas, including the use of electricity in the Head Office (East Water Building).	Requested for exemption from checking information of subsidiaries.	✓
	302-4	Reduction of energy consumption		66			
	302-5	Reductions in energy requirements of products and services		68			
GRI 3 Material Topics 2021	WATER						
	3-1	Process to determine material topics		56-62			
	3-2	List of material topics					
	3-3	Management of material topics		29			
GRI 303 Water 2018	303-1	Direct (Scope 1) GHG emissions		56, 62, 110	Report only the operations in the EWG’s operating areas.		
	303-2	Energy indirect (Scope 2) GHG emissions		45			

GRI Standard		Disclosure	Page number		Reporting Scope	Omission Note	External Assurance
			AR	SR			
GRI 303 Water 2018	303-3	Water withdrawal		45, 58, 60, 110, 112	Wastewater treatment business (29) Raw water business (40,89,91) Office building, Pump Station, Staff residence (42)		✓
	303-4	Water discharge		45, 60	Report only for Office building, Pump Station, Staff residence, and Wastewater treatment business		
	303-5	Water consumption		45, 58, 60, 120	Report only for Office building, Pump Station, Staff residence, and Wastewater treatment business		
GRI 3 Material Topics 2021	EMISSIONS						
	3-1	Process to determine material topics		63-68,			
	3-2	List of material topics		94, 96			
	3-3	Management of material topics		29			
GRI 305 Emissions 2016	305-1	Direct (Scope 1) GHG emissions		68	Report only the operating areas and include electricity energy usage of the EWG Head Office (East Water Building)		✓
	305-2	Energy indirect (Scope 2) GHG emissions		63, 65-66, 68			
	305-3	Other indirect (Scope 3) GHG emissions		-		Requested for exemption of numeric data set due to data collection	
	305-4	GHG emissions intensity		69			
	305-5	Reduction of GHG emissions		66			
	305-6	Emissions of ozone-depleting substances (ODS)		94			
	305-7	Nitrogen oxides (NO <sub>x</sub> ), sulfur oxides (SO <sub>x</sub> ), and other significant air emissions		-	The Company has no operations with emissions of Nitrogen oxides (NO <sub>x</sub> ), Sulfur oxides (SO <sub>x</sub> )		
GRI 3 Material Topics 2021	EMISSIONS AND WASTE						
	3-1	Process to determine material topics		45, 56,			
	3-2	List of material topics		71			
	3-3	Management of material topics		29			
GRI 306 Effluents and Waste 2016	306-1	Water discharge by quality and destination		45			
	306-2	Waste by type and disposal method		71			
	306-3	Significant spills		71, 94			
	306-4	Transport of hazardous waste		71			
	306-5	Water bodies affected by water discharges and/or runoff		71			

GRI Standard	Disclosure		Page number		Reporting Scope	Omission Note	External Assurance
			AR	SR			
Material Topics							
GRI 400 Social Standard Series							
GRI 3 Material Topics 2021	EMPLOYMENT						
	3-1	Process to determine material topics		74-77, 83-87			
	3-2	List of material topics					
	3-3	Management of material topics		29			
GRI 401 EMPLOYMENT 2016	401-1	New employee hires and employee turnover		114, 118-119	Report of EWG’s employees		
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	89	84	Report of the Company’s employees		
	401-3	Parental leave		115, 120	Report of EWG’s employees		
GRI 3 Material Topics 2021	OCCUPATIONAL HEALTH AND SAFETY						
	3-1	Process to determine material topics		74, 88-95			
	3-2	List of material topics					
	3-3	Management of material topics		29			
GRI 403 Occupational-health-and-safety 2018	403-1	Occupational health and safety management system		88			
	403-2	Hazard identification, risk assessment, and incident investigation		88			
	403-3	Occupational health services		90			
	403-4	Worker participation, consultation, and communication on occupational health and safety		89			
	403-5	Worker training on occupational health and safety		90			
	403-6	Promotion of worker health		90			
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships		88, 90			
	403-8	Workers covered by an occupational health and safety management system		88, 122			
	403-9	Work-related injuries		88, 122	Permanent and contracted employees including subcontractor employees only for the projects with procurement contracts.	Requested for exempting all numeric data set of of absentee rate of subcontractor because they are not essential to the business operation.	✓
	403-10	Work-related ill health		88, 90, 122			



GRI Standard	Disclosure		Page number		Reporting Scope	Omission Note	External Assurance
			AR	SR			
Material Topics							
GRI 400 Social Standard Series							
GRI 3 Material Topics 2021	TRAINING AND EDUCATION						
	3-1	Process to determine material topics		74-86			
	3-2	List of material topics					
	3-3	Management of material topics		29			
GRI 404 Training and Education 2016	404-1	Average hours of training per year per employee		77	Report of only the Company's Employees		
	404-2	Programs for upgrading employee skills and transition assistance programs		77, 81, 84			
	404-3	Percentage of employees receiving regular performance and career development reviews		74, 80			
GRI 3 Material Topics 2021	LOCAL COMMUNITIES						
	3-1	Process to determine material topics		96-105			
	3-2	List of material topics					
	3-3	Management of material topics		29			
GRI 413 Local Communities 2016	413-1	Operations with local community engagement, impact assessments, and development programs		96, 98	Operations in the Company's construction projects.		
	413-2	Operations with significant actual and potential negative impacts on local communities		96			
GRI 3 Material Topics 2021	CUSTOMER HEALTH AND SAFETY						
	3-1	Process to determine material topics		47-53			
	3-2	List of material topics					
	3-3	Management of material topics		29			
GRI 416 Local Communities 2016	416-1	Assessment of the health and safety impacts of product and service categories		49, 51-52			
	416-2	Incidents of non-compliance concerning the health and safety impacts of products and services		50, 53			



# LRQA Independent Assurance Statement

## Relating to Eastern Water Resources Development and Management Public Company Limited's Sustainability Report for the calendar year 2022 (1<sup>st</sup> January 2022 – 31<sup>st</sup> December 2022)

This Assurance Statement has been prepared for Eastern Water Resources Development and Management Public Company Limited in accordance with our contract but is intended for the readers of this Report.

### Terms of engagement

LRQA Limited was commissioned by Eastern Water Resources Development and Management Public Company Limited (EW) to provide independent assurance on its Sustainability Report FY 2022 for the period from 1<sup>st</sup> January 2022 to 31<sup>st</sup> December 2022 ("the report") against the assurance criteria below to a limited level of assurance and at the materiality of the professional judgement of the verifier using LRQA's verification procedure. LRQA's verification procedure is based on current best practice, is in accordance with ISAE3000 (revised) and uses the following principles of - inclusivity, materiality, responsiveness, impact and reliability.

Our assurance engagement covered EW's operations and activities in Thailand only and specifically the following requirements:

- Confirming that the report is in accordance with the GRI Standard (2021)<sup>1</sup>
- Evaluating the reliability of data and information for only the selected environmental and social indicators listed below:
  - GRI 302-3: Energy Intensity
  - GRI 303-3: Water withdrawal
  - GRI 305-2: Energy indirect GHG emissions (Scope 2)<sup>2</sup>
  - GRI 403-9 Work-related injuries (absenteeism rate only)

Our assurance engagement excluded the data and information of EW's operations besides the defined sustainability reporting boundary, as well as suppliers, contractors and any third parties mentioned in the report.

LRQA's responsibility is only to EW. LRQA disclaims any liability or responsibility to others as explained in the end footnote. EW's responsibility is for collecting, aggregating, analysing and presenting all the data and information within the report and for maintaining effective internal controls over the systems from which the report is derived. Ultimately, the report has been approved by, and remains the responsibility of EW.

### LRQA's Opinion

Based on LRQA's approach, the direct and indirect GHG emissions data in the report are materially correct and nothing has come to our attention that would cause us to believe that EW has not:

- Met the requirements above
- Disclosed reliable performance data and information as no errors or omissions were detected.

The opinion expressed is formed on the basis of a limited level of assurance and at the materiality of the professional judgement of the verifier.

**Note:** The extent of evidence-gathering for a limited assurance engagement is less than for a reasonable assurance engagement. Limited assurance engagements focus on aggregated data rather than physically checking source data at sites. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

### LRQA's approach

LRQA's assurance engagements are carried out using our verification procedure. The following tasks though were undertaken as part of the evidence gathering process for this assurance engagement:

- Assessing EW's approach to stakeholder engagement to confirm that issues raised by stakeholders were captured correctly. We did this through interviews with external stakeholders and reviewing documents and associated records.

<sup>1</sup> <https://www.globalreporting.org>

<sup>2</sup> GHG quantification is subject to inherent uncertainty.



- Reviewing EW's process for identifying and determining material issues to confirm that the right issues were included in their report. We also tested the filters used in determining material issues to evaluate whether EW makes informed business decisions that may create opportunities that contribute towards sustainable development.
- Auditing EW's data management systems to confirm that there were no significant errors, omissions or mis-statements in the report. We did this by reviewing the effectiveness of data handling procedures, instructions, and systems, including those for internal verification. We also spoke with those key people responsible for compiling the data and drafting the report.
- Sampling of evidence during remote verification to confirm reliability of performance data and information for only the selected indicators.

### Observations

Further observations and findings, made during the assurance engagement, are:

- Stakeholder inclusivity: We are not aware of any key stakeholder groups that have been excluded from EW's stakeholder engagement process. EW has open dialogue with all its stakeholders, though the frequency of engagement with trade unions would benefit from more regular scheduling.
- Materiality: We are not aware of any material issues concerning EW's sustainability performance that have been excluded from the report. It should be noted that EW has established extensive criteria for determining which issue/aspect is material and that these criteria are not biased to the company's management.
- Responsiveness: EW has established and implemented processes for responding to the concerns of various stakeholder groups especially in relation to water loss management program as defined in the company objective and target for water resource management program.
- Impact: EW should further address key quantitative impacts regarding GHG scope 3 in future reports. Also, future reports should consider significant GHG impacts within the Corporate Value Chain.
- Reliability: Data management systems are properly defined for the selected environmental indicators. However, we believe that data verification of EW's future reports should extend the boundary of GHG emissions and water disclosure to all business units.

### LRQA's standards, competence and independence

LRQA ensures the selection of appropriately qualified individuals based on their qualifications, training and experience. The outcome of all verification and certification assessments is then internally reviewed by senior management to ensure that the approach applied is rigorous and transparent.

This verification is the only works undertaken by LRQA for Eastern Water Resources Development and Management Public Company Limited and as such does not compromise our independence or impartiality.



Dated: 29<sup>th</sup> March 2023

LRQA Lead Verifier  
On behalf of LRQA (Thailand) Ltd.

No.9, G Tower Grand Rama 9, FL. 30, Room H14,  
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LRQA reference: BGK00000832

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