THAILAND TAXONOMY

Waste Management Sector

May 2025

THAILAND TAXONOMY BOARD

Table of Contents

Table of contents I

List of figures III

List of tables IV

Thailand Taxonomy Boad Phase II V

List of abbreviations VI

Summary VIII

Waste management sector background 1

1. Major issues from waste and key measures 1
2. Current state and outlook of waste management in Thailand (by source) 8

Interoperability with international taxonomies 20

Proposed Thailand taxonomy waste management activities 21

Guiding principles for setting technical screening criteria (TSC) 24

1. Guiding Principles for TSC setting in EO1: Climate change mitigation 24
2. Guiding Principles for TSC setting in EO2: Climate change adaptation 25
3. Guiding Principles for TSC setting in EO3: Sustainable use of marine and water resources 26
4. Guiding Principles for TSC setting in EO4: Resource resilience and transition to a circular economy 26
5. Guiding Principles for TSC setting in EO5: Pollution prevention and control 28
6. Guiding Principles for TSC setting in EO6: Protection and restoration of biodiversity and ecosystem 28

TSC for waste management activities 28

1. Anaerobic digestion of bio-waste or wastewater 29
2. Composting of bio-waste 34
3. Collection and transport of waste 36
4. Depollution and dismantling of end-of-life products 44
5. Waste to energy 47
6. Landfill gas capture and utilisation 50
7. Remediation of contaminated sites and areas 52

8. Remediation of legally non-conforming landfills and abandoned or illegal waste dumps 58
9. Sorting and material recovery from non-hazardous waste 64
10. Treatment of hazardous waste 68
11. Construction, extension, upgrade, operation and renewal of decentralised wastewater collection and treatment 71
12. Construction, extension, upgrade, and operation of centralised wastewater collection and treatment 75
13. Renewal of centralised wastewater collection and treatment 79
ANNEX I Example of compliance record 83
ANNEX II Applicable laws 85
ANNEX III Thailand Taxonomy waste management activities – interoperability with other taxonomies 134
References 140

List of Figures

Figure 1 Thailand Emissions from Waste Sector in 2022 (MONRE, 2024) 2
Figure 2 Thailand Net zero GHG emission timeline for waste sector (MONRE, 2022) 4
Figure 3 Thailand Annual Average PM 2.5 (Microgram/m3) 2014-2023 (PCD, 2024b) 5
Figure 4 Waste Disposal Operation in Thailand (PCD, 2024b) 7
Figure 5 Overview of 2023 Thailand MSW Management including hazardous waste (PCD, 2024b) 9
Figure 6 Thailand 2021 MSW Composition (PCD, 2024a) 9
Figure 7 Food Waste Composition by Source Type 13
Figure 8 Municipal Hazardous Waste Generated and Treated from 2018 – 2023 15
Figure 9 Solid Waste Management Activities proposed for Thailand Taxonomy Waste Management 23
Figure 10 Wastewater Management Activities proposed for Thailand Taxonomy Waste Management 24
Figure 11 Waste Management Hierarchy (PCD, 2023b) 25

List of Tables

Table 1: Measures and Potential to Reduce Greenhouse Gases from Waste Management Sector (PCD, 2023c)..... 3
Table 2: Proposed Taxonomy Waste Management Activities..... 21

Thailand Taxonomy Boad Phase II

Waste Management sector

1. Department of Climate Change and Environment, Ministry of Natural Resources and Environment
2. Bank of Thailand
3. Securities and Exchange Commission
4. Stock Exchange of Thailand
5. Department of Alternative Energy Development and Efficiency, Ministry of Energy
6. Department of Industrial Works, Ministry of Industry
7. Thai Industrial Standards Institute, Ministry of Industry
8. Department of Local Administration, Ministry of Interior
9. Wastewater Management Authority, Ministry of Interior
10. Office of Natural Resources and Environmental Policy and Planning, Ministry of Natural Resources and Environment
11. Pollution Control Department, Ministry of Natural Resources and Environment
12. Department of Health, Ministry of Public Health
13. Bangkok Metropolitan Administration
14. Energy Regulatory Commission
15. Thailand Greenhouse Gas Management Organization
16. Board of Trade of Thailand
17. Federation of Thai Industries
18. Renewable Energy Industry Club, Federation of Thai Industries
19. Thai Banker's Association
20. Association of International Bank
21. Government Financial Institutions Association

Sponsored by ADB

Developed by DNV

In cooperation with CBiS Carbon Institute for Sustainability

List of abbreviations

ADR	Agreement concerning the International Carriage of Dangerous Goods by Road
AEDP	Alternative Energy Development Plan
BCG	Bio-Circular-Green Economy
BOD	Biochemical Oxygen Demand
CEMS	Continuous Emissions Monitoring Systems
CBI	Climate Bonds Initiative
CRVA	Climate Risk and Vulnerability Assessment
DIW	Department of Industrial Works
DLT	Department of Land Transport
DNSH	Do No Significant Harm
EO	Environmental Objective
EPPO	Energy Policy and Planning Office
EPR	Extended Producer Responsibility
ESM	Environmentally Sound Management
EU	European Union
FiTV	Feed-in Tariff Variable
GHG	Greenhouse Gas
IPCC	Intergovernmental Panel on Climate Change
ISIC	International Standard Industrial Classification
ISO	International Organization for Standardisation
IQAir	Swiss air quality technology company
MONRE	Ministry of Natural Resources and Environment
MAS	Monetary Authority of Singapore
MRF	Material Recovery Facility
MSW	Municipal Solid Waste
NDCs	Nationally determined contributions
PCD	Pollution Control Department
PDD	Power Development Plan
P.E.	Population Equivalent
PM	Particulate Matter

SOP	Standard Operating Procedure
SUPs	Single-Use Plastics
SGT	Singapore Taxonomy
TEI	Thailand Environment Institute
TIPMSE	Thailand Institute of Packaging Management and Recycling for the Environment
TSC	Technical Screening Criteria
WEEE	Waste Electrical and Electronic Equipment
WtE	Waste-to-Energy

Summary

This report, "Thailand Taxonomy Phase II Waste Management Sector," addresses the critical issues and future outlook of waste management in Thailand. It is based on the Nationally Determined Contribution (NDC) Roadmap on Mitigation (2021-2030), formulated by the Office of Natural Resources and Environmental Policy and Planning (ONEP). The report aims to mitigate greenhouse gas emissions and enhance waste and wastewater management practices in alignment with international standards, particularly the European Taxonomy (EUT) and Green Finance Industry Taskforce Taxonomy (GFIT[1]) or the Singapore Taxonomy (SGT).

a. Key Findings:

- **Emissions from Waste**: Methane emissions from landfills and wastewater treatment are significantly more potent than CO2 at trapping heat. In 2022, the waste sector in Thailand emitted 22,172.96 ktCO2e, representing 5.75% of the country's total emissions. These emissions stem primarily from solid waste disposal and wastewater treatment.

- **Air Pollution (PM2.5)**: Open burning of agricultural waste and emissions from waste treatment contribute to severe air pollution, especially PM2.5, leading to significant health impacts. In 2023, Thailand ranked the fifth in Southeast Asia for poor air quality. Bangkok and Chiang Rai are notably affected, with pollution levels far exceeding WHO standards.

- **Environmental Contamination**: Illegal landfills and improper hazardous waste disposal contaminate soil and water, posing long-term risks to ecosystems and human health. Regulatory frameworks need strengthening to address these challenges effectively.

- **Municipal Solid Waste (MSW)**: In 2023, Thailand generated 26.95 million tonnes of MSW, with only 34% being recycled. The rest was either properly disposed of or mishandled. The report highlights the need for improved waste segregation and recycling practices.

[1] Established by Monetary Authority of Singapore.

- **Hazardous Waste**: Hazardous waste, including waste electrical and electronic equipment (WEEE), is poorly managed, leading to illegal dumping and environmental hazards. Industrial hazardous waste management also faces significant challenges.

- **Wastewater**: Inadequate wastewater treatment systems contribute to water pollution. Only 1% of surface water was rated as being in very good condition in 2023, emphasizing the need for better wastewater management infrastructure.

b. Interoperability with International Taxonomies:

- Thailand is working to align its waste management activities with international standards and existing Taxonomies, specifically the European Taxonomy (EUT) and Singapore Taxonomy (SGT). This alignment aims to foster global coherence in sustainability practices and support Thailand's transition to a circular economy.

c. Proposed Waste Management Activities:

- The report proposes thirteen activities, covering solid waste and wastewater. These activities may contribute to various Environmental Objectives (EOs) such as Climate Change Mitigation, Pollution Prevention, and Circular Economy. The technical screening criteria (TSC) promote these EOs as well as the adoption of best available technologies and waste management practices, such as anaerobic digestion, composting, and waste-to-energy. These technologies and practices can reduce GHG emissions, enhance resource efficiency, and minimise the impacts of waste on land, water, and air quality. By applying these TSC, waste management activities can contribute to the transition to a low-carbon and circular economy and support the conservation and enhancement of natural capital.

Thailand faces significant challenges in waste management, including emissions, pollution, and environmental contamination. By aligning its practices with international taxonomies and implementing the proposed activities, Thailand can enhance its waste management systems, reduce greenhouse gas emissions, and move towards a more sustainable and circular economy. The Taxonomy waste sector has been prepared for investors, financial institutions and issuers to have common understanding of green activities to catalyse financing needs to the green economy.

Waste management sector background

After the COVID-19 pandemic, consumer behaviour changed, leading to an increase in certain types of waste. In 2023, the use of single-use plastics rose to approximately 3.03 million tonnes, or 11.25% of the total waste generated, which is an increase of 0.2 million tonnes from 2022, when single-use plastics amounted to 2.83 million tonnes. Municipal Solid Waste recovery rate was 34% in 2023. (PCD, 2024b). Low municipal solid waste recovery rate can be attributed to a lack of awareness, failure to separate hazardous materials, and inadequate regulations (MONRE, 2022). Therefore, addressing proper waste management, including collection, transportation, and treatment, is essential not only to reduce environmental impact but can also unlock economic benefits, such as reduced disposal costs and increased income from new products or waste management-related services.

Wastewater is a significant pollution issue in Thailand. The main sources of wastewater are from community and industrial sectors. According to PCD, in 2022 Thailand had 203 cluster and centralised wastewater treatment facilities.These treatment plants have a total capacity of 2.77 million cubic meters per day. Seven different types of community wastewater treatment systems are used: stabilization ponds (26%), Activated Sludge (42%), Constructed Wetland (5%), Aerated Lagoon (10%), Anaerobic Digestion (4%), Rotating Biological Contractor (2%), and other (11%) (PCD, 2025). The type of treatment system used depends on the characteristics of the wastewater from each industry. Major constraints to wastewater treatment in Thailand include the high cost of investment and the lack of continuous operation and maintenance. (PCD, 2025)

This paper provides a summary about waste management in Thailand and the development of Thailand Taxonomy Waste Management.

1. Major Issues from Waste and Key Measures

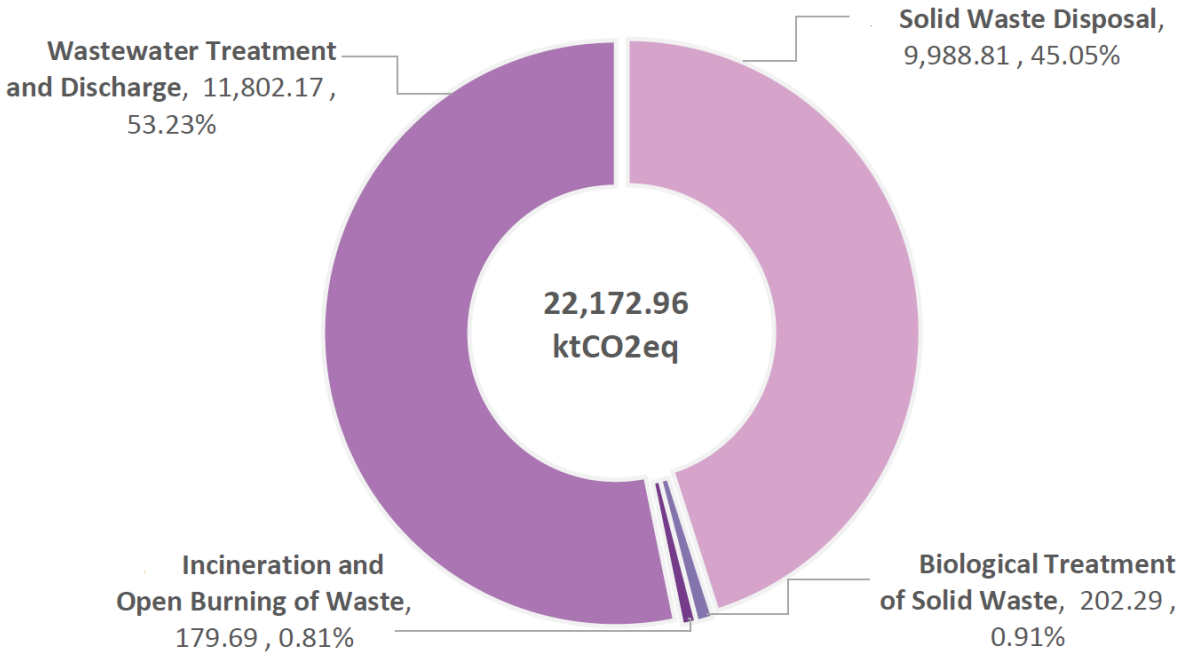
1.1 Emissions from Waste

Methane gas emitted from landfills and/or anaerobic digestion of organic waste is about 28 times more effective than CO2 at trapping heat in the atmosphere over a 100-year period (IPCC, 2021). Thailand's First Biennial Transparency Report: BTR1 shows that Greenhouse gas (GHG) emissions from the waste sector in Thailand were 22,172.97 ktCO2e, which represented

5.75% of the total 385,941.14 ktCO2eq emissions in 2022. GHG emissions primarily stemmed from:

- Solid waste disposal, contributing 45.05% or 9,988.81 ktCO2eq;
- Wastewater treatment and discharge, accounting for 53.23% or 11,802.16 ktCO2eq;
- Biological treatment of solid waste represents a smaller proportion at 0.91% or 202.29 ktCO2eq of total GHG emissions in this sector;
- Waste incineration and Open Burning constituted the smallest portion at 0.81% or 179.69 ktCO2eq; (MONRE, 2024)

Figure 1 Thailand Emissions from Waste Sector in 2022 (MONRE, 2024)



Whilst emissions from waste appear small compared to other sectors, waste management is crucial as it mitigates negative social and environmental impacts. Poor waste management, including inadequate collection systems and ineffective disposal, leads to air pollution, water and soil contamination. Open and unsanitary landfills contaminate drinking water and can spread infections and diseases. Debris dispersal pollutes ecosystems, while hazardous substances from electronic and industrial waste harm urban health and the environment. Indiscriminate waste disposal practices can introduce hazardous chemicals into soil, water bodies, and the air, causing long-term, potentially irreversible damage to local flora and fauna.

This negatively impacts biodiversity, harms entire ecosystems, and allows these chemicals to enter the human food chain.

To address waste management and environmental sustainability, Thailand has undertaken various efforts. The Thailand Nationally Determined Contributions (NDC) was formulated based on several roadmaps, including the first National Action Plan on Waste Management (2016-2021), which was approved by the Cabinet Resolution on 3 May 2016.

The Pollution Control Department (PCD) collaborated with relevant authorities to devise the NDC Sectoral Action Plan for the Waste Sector 2021-2030. The plan aims to decrease GHG emissions by 2.0 MtCO2eq from municipal solid waste and municipal/industrial wastewater. Approximately 65% of this reduction (1.3 MtCO2eq) is anticipated to result from implementing measures in the municipal solid waste sector, with the remaining 35% (0.7 M tCO2eq) expected from wastewater management measures (PCD, 2023c)

Table 1: Measures and potential to reduce greenhouse gases from Waste Management Sector (PCD, 2023c)

Unit: MtCO2eq

Sector	Sub-sector	Measures	2020	2025	2030
Waste Management Sector	Solid waste management	Waste reduction (reducing waste generation and increasing the reuse and recycling rates).	0.36	0.79	1.30
	Wastewater management	Increasing biogas production from industrial wastewater and utilisation thereof.	0.20	0.43	0.70
		Managing other industrial wastewater.			
		Managing domestic wastewater.			
	Total emissions reduction		0.56	1.22	2.00

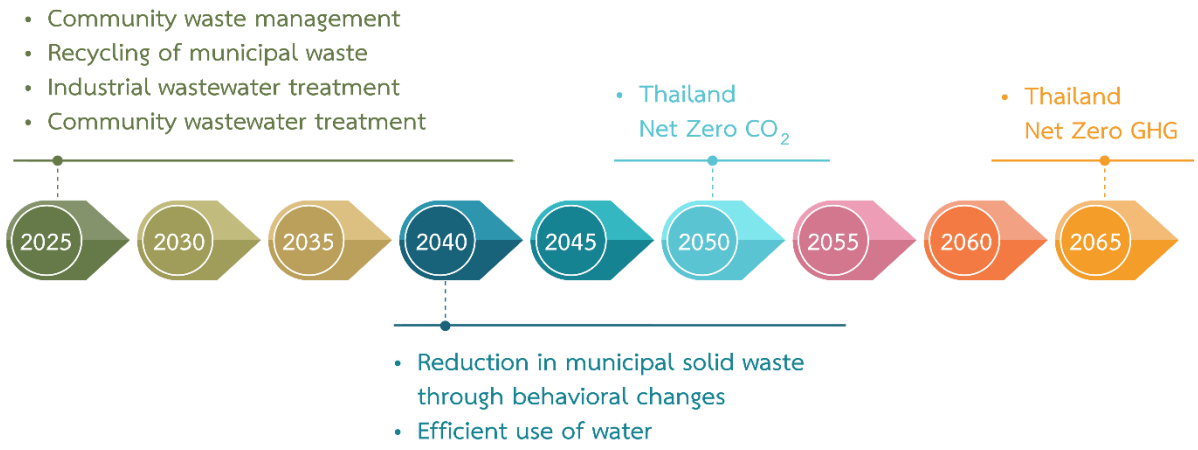
Since the first Waste Management National Plan ended in 2021, several problems and limitations in its implementation have been identified. The problems include illegally operating landfills, incomprehensive waste tracking and monitoring system, and lack of

hazardous disposal capacity leading to illegal dumping of hazardous industrial waste. The Pollution Control Department (PCD) has developed the second Action Plan (2022-2027) to provide a framework and guidelines for addressing pollution from waste (PCD, 2023b). Key objectives of the 2nd Plan include:

- Proper management of 80% of Municipal Solid Waste;
- Increasing the use of recycled materials in production lines from recyclable waste to achieve a range of 74% to 100%;
- Reduction of food waste to 28%;
- Proper management of not less than 50% of community hazardous waste; and
- Ensuring 100% proper management of infectious waste and hazardous industrial waste (PCD, 2022b)

To achieve carbon neutrality by 2050, and a net zero target by 2065, Thailand has established specific goals and implemented a variety of key mitigation strategies. These strategies encompass a broad range of waste management techniques designed to minimize environmental impact, including waste reduction, landfill gas, waste to energy, semi aerobic landfill, composting, anaerobic digestion, mechanical biological treatment, industrial wastewater management, and production of biogas from methane gas (MONRE, 2022). These activities are included in Thailand Taxonomy Waste Management.

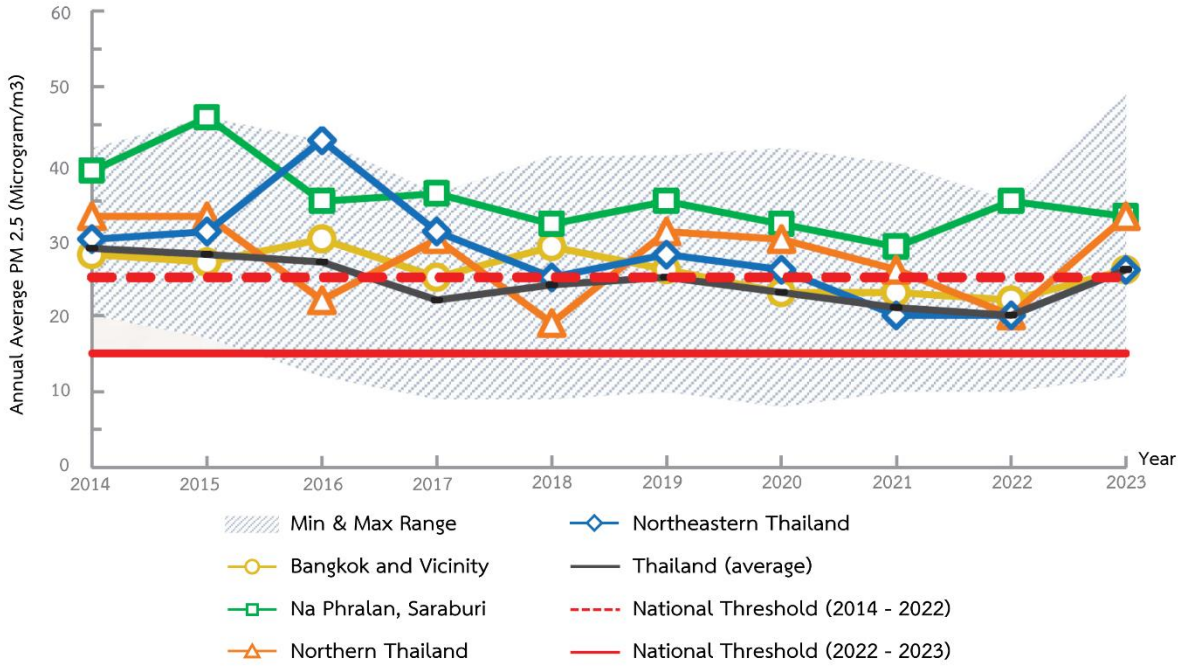
Figure 2 Thailand Net zero GHG emission timeline for waste sector (MONRE, 2022)



1.2 Air Pollution – PM 2.5

In Thailand, air pollution significantly impacted over 15.2 million residents, leading to more than 13,000 deaths. The majority of these fatalities occurred in Bangkok, where approximately 9,400 deaths in 2020 could have been avoided (IQAir, 2020). In 2023, Thailand ranked 36th globally and fifth in Southeast Asia for poor air quality. The report by IQAir highlighted that the average PM2.5 ultrafine dust concentration in Thailand was 23.3 micrograms per cubic meter of air (µg/m3), which exceeds the World Health Organization's recommended standard by 4.7 times. Bangkok was listed as the 37th most polluted city worldwide, with an average PM2.5 concentration of 21.7 µg/m3 in 2023 while Chiang Rai was fifth among the most polluted city in Southeast Asia (IQAir, 2024).

Figure 3 Thailand Annual Average PM 2.5 (Microgram/m3) 2014-2023 (PCD, 2024b)



In Thailand, PM 2.5 levels peak seasonally from winter to early summer, influenced by various factors, including high atmospheric pressure, temperature inversion, and calm winds, which hinder the particulate dispersion. Drought conditions worsen the situation by causing wildfires. Sources vary by regions; in Bangkok, high PM 2.5 due to traffic, industry and open burning, while PM 2.5 in North and Northeast came from wildfires, agricultural burning of rice, corn, and sugarcane, cross-border haze and traffic-related emissions. In the South, peak season due to peatland fires and transboundary haze. (PCD, 2022a)

Recognizing the detrimental effects of air pollution, the Thai government has integrated measures to control and reduce emissions into national agendas and action plans. These efforts align with sustainable development goals, aiming to promote sustainable consumption and production while minimising the negative impacts on health and the environment. Numerous laws are in place to regulate open burning and mitigate its consequences (TEI, 2022).

Under the Thailand Taxonomy waste sector, the focus is to facilitate waste management from the collection at source to the place where waste is properly treated. In terms of the agricultural residuals value chain, treatment in a form of bioenergy will be under Technical Screening Criteria of bioenergy can be found in Thailand Taxonomy Phase 1, while collection and transport of agriculture residues to bioenergy power plants will be fall under waste management, Technical Screening Criteria of which will promote practices to prevent PM 2.5. situations, include:

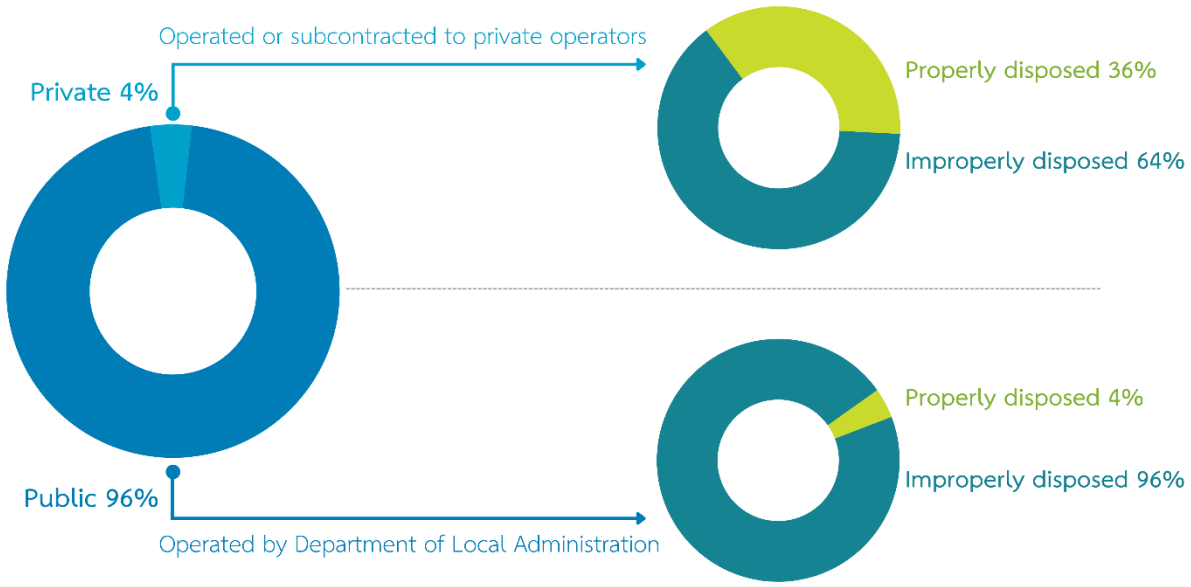
- Minimizing air pollution from waste transportation by promoting waste transportation emissions standards that are internationally recognized.
- Controlling particulate matter from waste management activities, ensuring compliance with best practices and relevant national regulation.

1.3 Environmental Contamination

Thailand has faced significant challenges in managing waste, particularly in the handling of hazardous waste like Cadmium and the proliferation of illegal landfills. These issues are exacerbated by weak regulatory frameworks and enforcement.

In 2023, out of 2,079 waste processing facilities, only 114 of these facilities, or 5%, were complying to relevant national regulations (82 state-owned and 32 privately owned). 1,965 facilities, or 95%, did not manage waste properly. Illegal waste management/storage facilities consist of more than 1,700 open dump or landfill sites, 62 open burning sites, 77 incineration plants without emissions control, and others (PCD, 2024b). In Bangkok alone, as of February 2023 the authorities have identified more than 23 illegal landfill sites located across various districts (Khaosod, 2022).

Figure 4 Waste Disposal Operation in Thailand (PCD, 2024b)



Illegal dumping involves the unauthorized disposal of waste, particularly hazardous industrial types, affecting the circular economy by losing recyclable materials and contaminating land and water. This contamination impairs crucial environmental processes and poses health risks, making recovery slow and impacting resource reuse in the economy. The research by Otwong, Jongmeewasin & Phenrat in 2021 found that the five main reasons for the illegal dumping of recyclable hazardous industrial waste in Thailand include:

- Insufficient market and financial feasibility analysis for reuse and recycling activities, leading to potential illegal dumping;
- A lack of monitoring the balance of materials used and waste produced. The recycling facilities need to report waste received and generated, but not recycled products or buyers. This loophole enables illegal dumping by recycling companies, either on-site or through fake transactions;
- Weak regulations on soil and groundwater contamination;
- A lack of transparency in the regulatory oversight process; and
- Inadequate penalties and minimal engagement from the private sector (Otwong, Jongmeewasin, & Phenrat, 2021)

Mitigation measures against illegal dumping include:

- Remediation of contaminated sites;
- Capacity building for local administrative organizations or relevant agencies to close illegal landfill waste disposal sites, and to strictly monitor potential environmental negative impact resulted from those sites; and
- Issuing regulations for the registration of waste disposal service providers to enable them to access low-interest loans (PCD, 2023b).

2. Current State and Outlook of Waste Management in Thailand (by source)

2.1 Municipal Solid Waste (MSW)

In 2023, Thailand generated approximately 26.95 million tonnes of municipal solid waste (MSW), which increase from 2022 at 25.70 million tonnes. Approximately 2.0 million tonnes (8%) of waste are managed at the source at the household level. Additionally, 4.8 million tonnes (18%) are sorted for reuse from households and various sources. The remaining 20.15 million tonnes (74%) are collected by local administrative organizations and transported to waste disposal sites. Some of this waste, around 4.51 million tonnes (16%), is further sorted for reuse. This results in 34% of waste being recovered, and leaves 15.64 million tonnes (58%) of waste for disposal, of which 10.17 million tonnes (38%) are properly disposed of, while 5.47 million tonnes (20%) are improperly disposed of. (PCD, 2024b)

Figure 5 Overview of 2023 Thailand MSW Management including hazardous waste (PCD, 2024b)

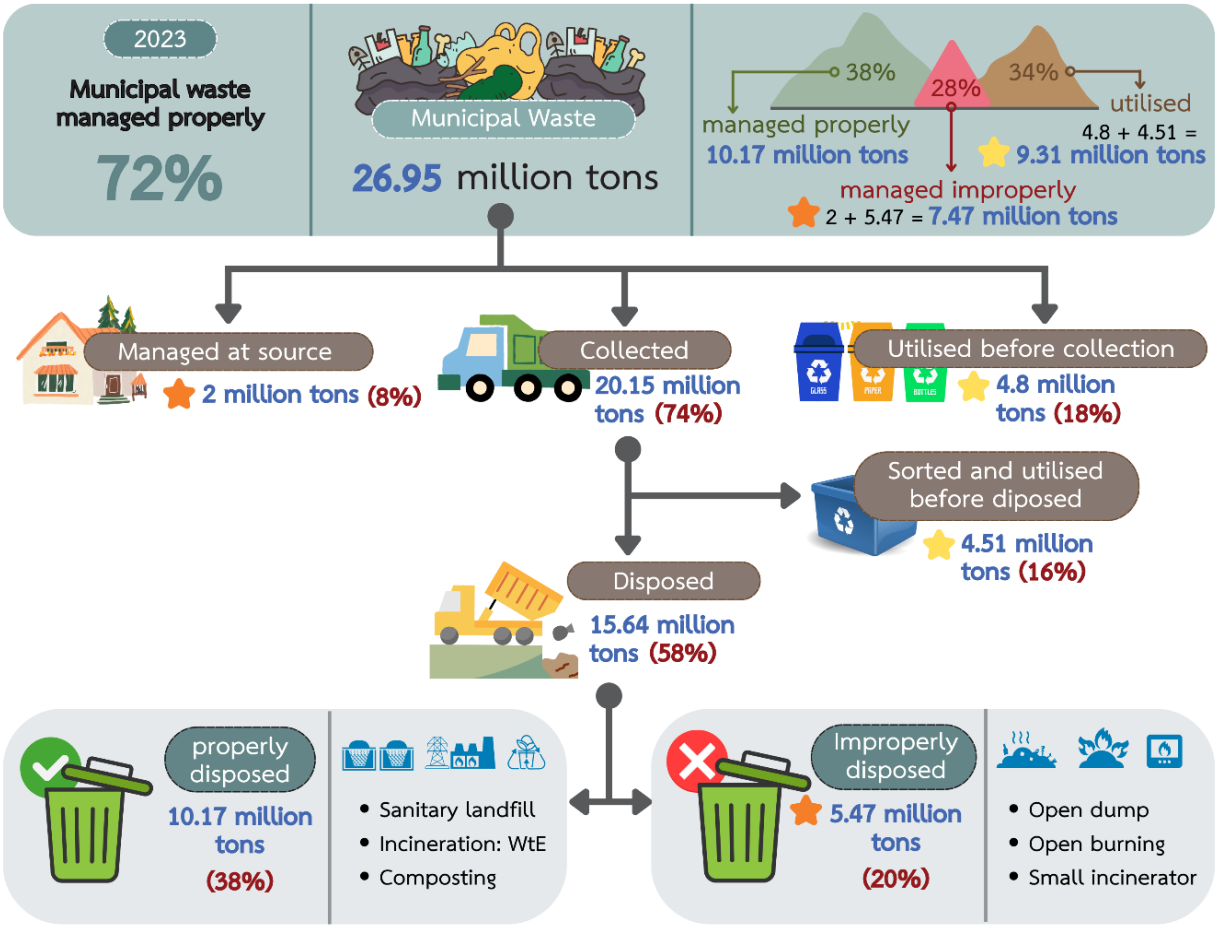
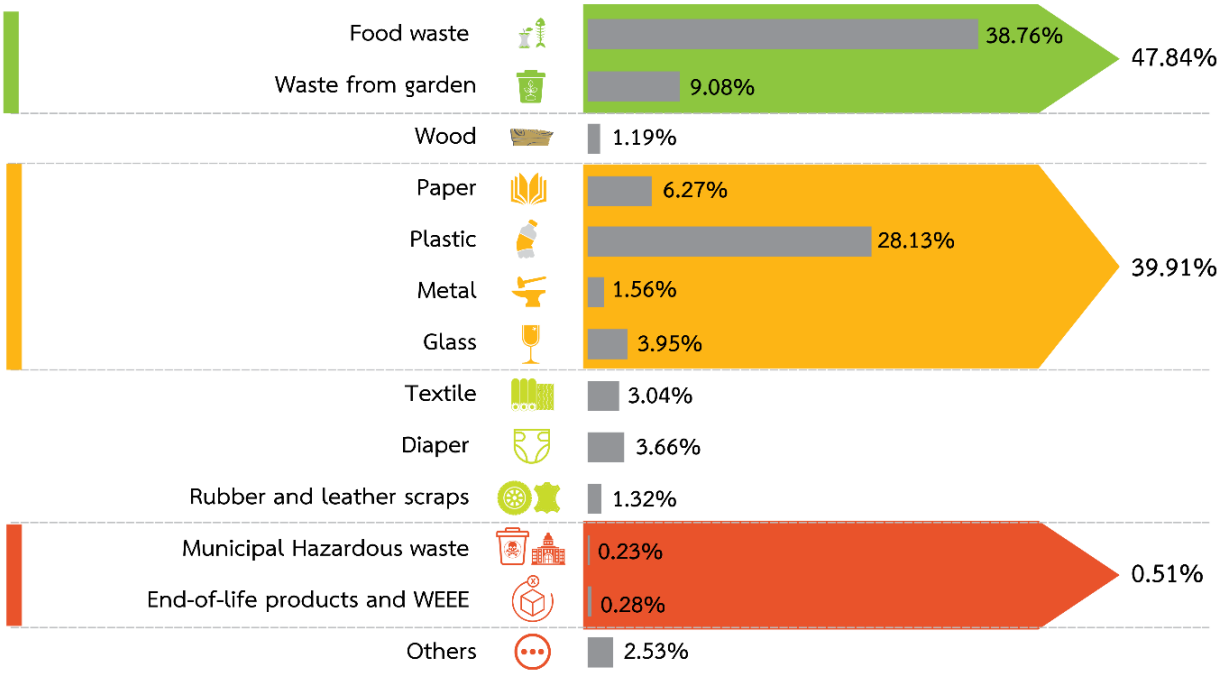


Figure 6 Thailand 2021 MSW Composition (PCD, 2024a)



MSW comprises 47.84% organic waste from food and garden, 28.13% plastic waste, 6.27% paper waste, and others (PCD, 2024a).

Waste segregation regulations in Thailand involve comprehensive laws that aim to manage and reduce environmental impacts from industrial and municipal waste. Key legislations include:

- The Ministry of Interior Announcement on Waste Management, B.E. 2567 (2024), focuses on segregation of waste at public collection facilities into 5 different categories which are general waste, organic waste, recyclable waste, hazardous waste, and infectious waste.
- The Public Health Act B.E. 2535 (1992), and subsequent amendments, mention segregation of infectious and hazardous waste from communities. Infectious waste and hazardous waste must be segregated at source into the following categories: light bulbs, batteries, chemical containers, medicinal products, WEEEs, and other hazardous waste.

PCD has set the goal to increase the proportion of plastic, glass, paper, and aluminum waste segregated for recycle or reuse purposes to 8 million tonnes or 30% of MSW by 2027 (PCD, 2023b).

A crucial strategy for managing and diminishing solid waste involves converting it into energy through a process known as Waste-to-Energy (WtE), which is projected to handle 26% of total municipal waste by 2027 (PCD, 2023b). However, WtE poses challenges in developing countries, including Thailand, due to high initial costs and the need for advanced technology.

The Thai government is prioritising WtE projects to tackle the country's waste management issues as part of its national agenda and waste disposal policy. Various initiatives, including feed-in tariff rates and subsidies, have been introduced to encourage investment in WtE projects. Despite interest from stakeholders and plans to increase the number of WtE projects, challenges such as funding issues, environmental concerns, and inefficient waste sorting persist. To address these challenges, future regulations emphasise environmentally sound operations and community acceptance, along with subsidies and tax incentives. The government has aimed to achieve a target of 500 MW for WtE in the most recent Power Development Plan by 2037 (EPPO, 2016). Nevertheless, the policy also has detractors. Environmental experts and academics have urged the government to reconsider its WtE strategy due to the emission of

hazardous pollutants and greenhouse gases from such projects (Rujivanarom, 2023) (Wachpanich & Coca, 2022).

It should be noted that WtE is yet not included in the EU Taxonomy (EU, 2024), although it is allowed in other taxonomies, such as Singapore Taxonomy (MAS, 2023) and the Climate Bonds Initiative Taxonomy (CBI, 2022). The reasons why EU Taxonomy does not regard WtE as green are:

- WtE incineration is seen as contradictory to circular economy principles because it destroys materials that could otherwise be recycled;
- WtE is considered less favourable compared to other renewable energy sources due to its carbon footprint;
- WtE could cause significant harm because it leads to increased waste generation and incineration, impacting pollution prevention and control (Makavou, 2021)

WtE is included in the Thailand Taxonomy due to its importance in waste reduction in the context of Thailand. According to Thailand's Power Development Plan (PDP) 2018-2037 (Rev. 1) and the National Waste Management Action Plan (2022-2027), the implementation of Waste-to-Energy (WtE) technology is being promoted to enhance the efficiency of waste management. Both strategic documents emphasize the critical necessity of initiating WtE projects within Thailand. The National Waste Management Action Plan projects that by 2027, up to 30% of solid waste management will incorporate WtE. Furthermore, the PDP sets a target of 400 MW for WtE power plant capacity.

Effective waste management has become crucial as many cities face a shortage of landfill space. With limited land availability and growing urban populations, governments must adopt sustainable waste management strategies, including WtE technologies. The process starts with policies aimed at minimizing waste, followed by recycling and WtE incineration, and disposing of the remaining ash in landfills. In addition, WtE systems are valued for their ability to generate renewable energy and, importantly, for their capacity to reduce waste volume, significantly decreasing the amount of waste sent to landfills, which in turn reduces methane gas production. These challenges are particularly pressing in Thailand, where the urban population continues to increase and urbanization is concentrated in large cities, necessitating substantial investments to manage the growing waste.

WtE technology is identified as a pivotal solution for addressing solid waste management challenges, offering numerous environmental benefits. These include reducing landfill usage, mitigating environmental risks associated with leachate contamination, lowering methane emissions from landfills, decreasing fossil fuel consumption for electricity generation, and reducing air pollution from uncontrolled incineration or open burning. The integration of WtE in the Thailand Taxonomy is expected to act as a catalyst in achieving these environmental and economic objectives.

In developing the Taxonomoy for WtE activity, international standards and other taxonomies have been taken into account. The green and amber criteria for the WtE activity in the Thailand Taxonomy are designed to align with Singapore Taxonomy criteria. To address concerns about potential negative environmental impacts, including air and odour pollution, preventive and mitigation measures have been incorporated into the Technical Screening Criteria (TSC). Pre-operational WtE plants must share baseline environmental assesment results with stakeholders upon request. Operational WtE plants must share the results of annual or bi-annual audit reports, conducted by the Energy Regulatory Committee, with stakeholders for transparency. Furthermore, to address concerns about lack of monitoring capacity from the regulatory authorities, a valid third-party certified environmental management must be put in place.

2.1.1 Food Waste

In 2023, the total amount of consumer level food waste generated across Thailand was approximately 10.24 million tonnes, or 155 kilograms per person per year. 40% of food waste components were edible, and 60% were inedible (PCD, 2024b)

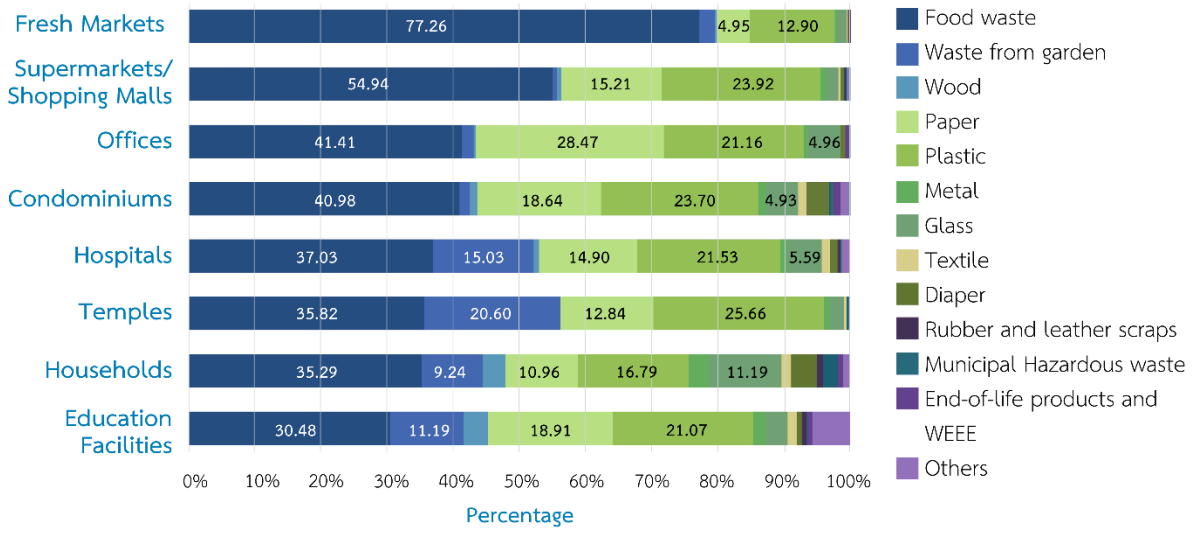
Improperly managed food waste produces methane and causes significant losses, including misused resources, higher costs, and environmental damage. These effects emphasize the urgent need for effective waste management strategies to mitigate environmental and socio-economic impacts.

Food waste is generated from various sources. Household food waste primarily consists of inedible post-consumption items such as eggshells and fish bones. In contrast, food waste from hotels and restaurants arises through different stages of food preparation, including leftovers from restaurant buffets. Currently, many department stores and supermarkets have implemented measures to mitigate food waste. These measures include aligning their orders

with customer demand, discounting food near closing time, and donating surplus food to various foundations. However, the number of organizations that accept surplus food remains limited. Additionally, households lack motivation to separate waste, with approximately 35% of households still disposing of food waste along with general waste (PCD, 2024a).

To effectively address Thailand's food waste problem, a Food Waste Management Roadmap (2023-2027) and a Phase 1 Food Waste Management Action Plan (2023-2027) were developed. These plans aim to reduce the proportion of food waste from 39% to no more than 28% by 2027 with measures ranging from segregating food waste at source, for example, as animal feed or for producing biogas, thereby reducing waste residues that can spread diseases, reduce pollution from waste, and minimize the waste sent for landfill or incineration (PCD, 2024a)

Figure 7 Food Waste Composition by Source Type



2.1.2 Plastic Waste

Thailand's petrochemical sector is the largest in Southeast Asia and ranks as the 16th largest globally (World Bank Group, 2021). In 2023, 3.03 million tonnes of waste were single-use plastics (SUPs), constituting approximately 11.25% of the total municipal solid waste (MSW) generated, with only about 0.75 million tonnes or 25% of SUP waste being sorted and recycled (PCD, 2024b). This marks an increase from 0.71 million tonnes in 2022, driven by various policy initiatives, including the implementation of Phase 2 (2023–2027) of the Plastic Waste Management Action Plan which aims to enhance sustainable plastic waste management, with a strong emphasis on waste management at the source, ultimately leading to more effective and long-term plastic waste solutions (PCD, 2024b).

Marine debris entering the upper Gulf of Thailand was 882 tonnes in 2023, a notable reduction from 1,636 tonnes in 2022. Single-use plastics remained the dominant pollutant, encompassing items like food bags, handle bags, and thin plastic film (PCD, 2024b). Efforts to address marine debris include waste collection, advocacy for waste segregation, and campaigns involving public and private sectors, as well as local organisations, resulting in the collection of significant amounts of garbage from coastal habitats in 2021 (PCD, 2023a). The Department of Marine and Coastal Resources, along with relevant agencies, successfully removed 220,854.80 kilograms (221 tonnes) of waste from coastal ecosystems, totalling 3,688,082 pieces of litter in 2023 (PCD, 2024b).

Factors such as population density, education, and household size influence plastic consumption behaviour. On average, the disposal of end-of-life plastics releases 0.15 kg CO2eq per household per day, contributing to climate change, with improper waste management being common in many households. Proper waste management is essential for Thailand to achieve carbon neutrality in the future (Kittithammavong, Khanitchaidecha, & Thongsanit, 2023).

The Thai government has recognised plastic waste as a significant environmental challenge. Therefore, Action Plans on Plastic Waste Management was established in 2020, with the current phase 2 implementation (2023-2027), to provide clear definition and guidelines for plastic waste management and to improve efficiency across all sectors. The plan emphasises principles such as Bio-Circular-Green Economy (BCG Model), the 3R principle (Reduce, Reuse, Recycle), public-private partnerships, extended producer responsibility (EPR), and extended consumer responsibility (ECR). To reiterate Thailand's commitment, it has set a goal to have 100% of its plastic waste recycled and reused by 2027 (PCD, 2023a) .

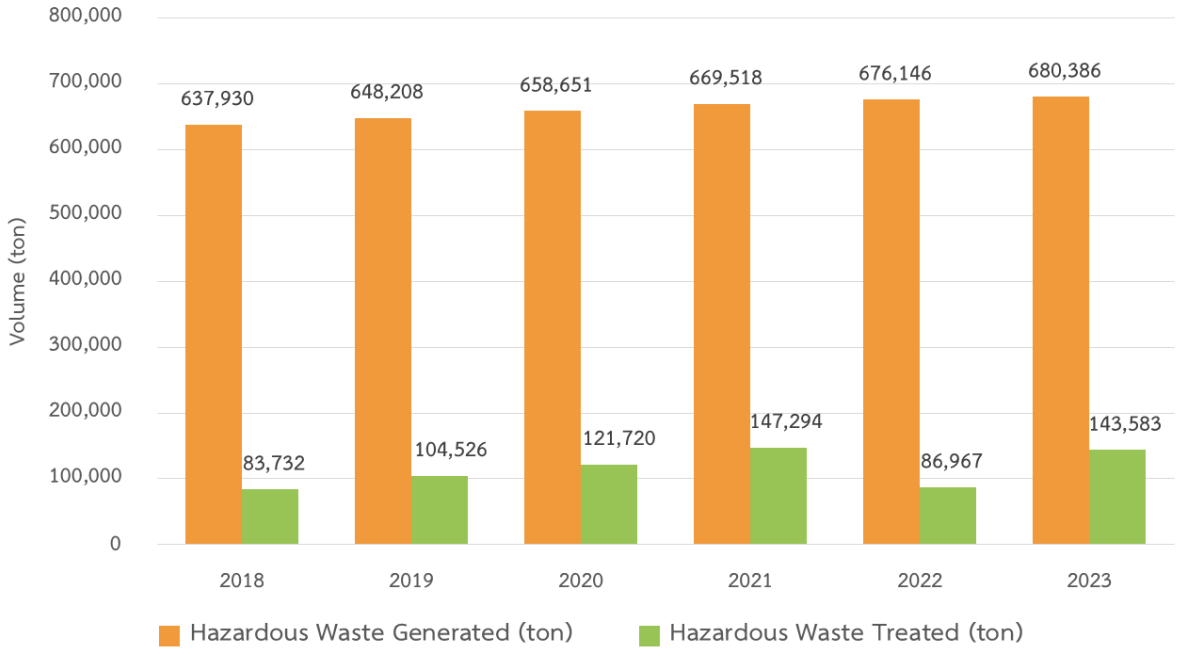
2.1.3 Municipal Hazardous Waste including WEEE and end-of-life products

The "Ministerial Regulation of Public Health regarding Management of Municipal Toxic and Hazardous Waste B.E. 2563 (2020)" defines hazardous waste from communities as 'Hazardous waste generated from community activities, consisting of substances or objects contaminated with toxic, flammable, oxidizing, peroxide, corrosive, reactive, explosive, or genetically mutagenic substances, or any other substances or objects that may cause or have the potential to cause harm to humans, animals, plants, property, or the environment.' This regulation excludes general solid waste, infectious waste, radioactive waste, and hazardous

waste as defined by factory related laws. These substances may pose a risk to human health, animals, plants, property, or the environment.

In 2023, hazardous waste from communities reached 680,386 tonnes, an increase of 0.627% from 2022. This increase is largely due to waste from electrical and electronic products (WEEE), which accounted for 65% of the total, while other hazardous wastes—such as batteries, flashlights, chemical containers, and spray cans—comprised approximately 238,135 tonnes (35%). In 2023, a total of 143,583.24 tonnes of hazardous waste was properly managed, accounting for 94.36% of the total. This was divided into 101,852.52 tonnes for resource recovery, 41,730.72 tonnes for disposal, and 46,977 tonnes for safe landfill. However, when compared to the total amount generated, only 21.10% was properly disposed of, which is below the target of 30% set in the country's second waste management plan (2022-2027). Effective hazardous waste management, particularly for electronic and electrical waste, is hampered by several critical issues. First, collection systems are not adequately integrated into standard waste management practices. Second, the availability of consistent and geographically diverse treatment and disposal facilities is insufficient. Finally, regulatory ambiguities surrounding e-waste management create confusion and hinder clear delegation of responsibilities to relevant agencies. These shortcomings contribute to improper handling of hazardous materials, posing potential environmental and public health risks (PCD, 2024b)

Figure 8 Municipal Hazardous Waste Generated and Treated from 2018 – 2023



The "Ministerial Regulation of Public Health regarding Management of Municipal Toxic and Hazardous Waste B.E. 2563 (2020)" mandates that local administrative organizations take charge of the collection and disposal of hazardous waste from households including items like batteries, light bulbs, and containers contaminated with chemicals. Local administrative organisations are also required to provide appropriate containers, designated collection points, or central storage facilities for hazardous waste. The transportation of municipal hazardous waste from these central storage facilities to treatment facilities is governed not only by the Ministerial Regulation of Public Health regarding Management of Municipal Toxic and Hazardous Waste, but also by the "Ministry of Industry Announcement on the Management of Refuse or Unused Materials B.E. 2566 (2023)." Due to this regulatory separation, the criteria of municipal hazardous waste transportation and collection to collection points falls under a framework that allows for material recovery during transport. Non-recyclable hazardous waste transported to central storage is then subsequently sent to treatment facilities, contributing to pollution prevention and control efforts.

As of March 2025, a draft version of WEEE Integrated Action Plan B.E. 2565 - 2569 (2022 - 2026) has been published on the website of PCD. The objectives of the Action Plan are to develop an efficient system for the segregation and collection of WEEE, to have WEEE properly dismantled, recycled, and disposed of, and to establish at least one waste product Environmentally Sound Management (ESM) plants by 2026 (PCD, 2021).

Thailand's urban expansion and rising vehicle ownership, coupled with its role as a major auto manufacturer hub, have led to a surge in end-of-life vehicles (ELVs). Addressing the environmental impacts of ELVs disposal is crucial as urbanization and economic growth accelerate, highlighting the need for sustainable vehicle disposal practices.

Statistics from the Department of Land Transport show an upward trend in the number of privately owned cars from 38.87 million in 2019 to 42.57 million in 2023 (DLT, 2024). It is estimated that by 2045, Thailand will have 16 million end-of-life vehicles with an accumulated battery weight of almost 0.5 million tonnes to deal with. As of 2023, there are only 4 fully integrated automobile dismantling factories currently in operation with the total capacity of 23,500 tonnes of end-of-life-vehicles per year (PCD, 2023b).

The operational objectives outlined in the second national waste management action plan (2022-2027) for hazardous waste management aim to achieve progressively increasing

percentages of proper management for hazardous waste generated by households. Targets are set to increase by 5% annually, starting from 25% in 2022 and reaching 50% by 2027. Three measures have been defined for hazardous waste management as follows:

1. **Management at Source**: Sorting and collecting hazardous waste to increase recovery rate, and/or to be treated by competent waste processors.
2. **Improvement of Disposal Systems**: Enhancing the efficiency of waste disposal systems, such as supporting investments in the establishment of dismantling and WEEE and ELVs disposal facilities.
3. **Development of Waste Management Tools**: Creating management tools, including the enactment of WEEE and ELVs legislation (PCD, 2023d).

2.2 Industrial Waste

In 2023, Thailand recorded a total of 19.82 million tonnes of industrial waste notified for transportation and integrated into the Department of Industrial Works' management system. This comprised 18.69 million tonnes of non-hazardous waste and 1.13 million tonnes of hazardous waste, based on data collected from January 1 to October 31, 2023. The Eastern region had the highest potential for treating and disposing of industrial waste, with a ratio of waste generators to waste processors at 12:1. Following this were the Central, Northeastern, Western, Northern, and Southern regions, respectively. The Southern region had the highest ratio of waste generators to processors at 108:1. However, medium and small-sized enterprises still lacked understanding and compliance with waste management regulations, and they often lacked personnel dedicated to handling industrial waste. Additionally, these businesses faced high costs associated with exporting hazardous waste for treatment (PCD, 2024b).

In addition to domestic hazardous industrial waste, Thailand was also one of the countries that has been importing such waste from developed countries prior to the ratification of Ban Amendment in 2023. Thailand ratified the Basel Convention on the Control of Transboundary Movement of Hazardous Waste and their Disposal in 1997 but has just officially ratified the Ban Amendment in 2023. This amendment prohibits the export or movement of hazardous wastes across borders between countries (PCD, 2023b).

Ministry of Industry Announcement on the Disposal of Refuse or Unused Materials (Issue 3), B.E. 2566 introduced extended responsibility to waste generators. Waste generators are now

responsible for their waste from generation through to its complete disposal, including overseeing the waste processor's activities and taking necessary actions if waste processors fail or if accidents occur.

Challenges in hazardous industrial waste treatment include:

- **Insufficient Hazardous Waste Treatment Facilities**: The hazardous waste treatment facilities are concentrated only in the central and eastern regions, which does not cover all areas. This inadequacy leads to illegal dumping and improper disposal of hazardous industrial waste.
- **Inadequate Monitoring and Supervision**: There is a lack of comprehensive monitoring and supervision of factories generating hazardous industrial waste and those treating/disposing of it. This includes the entire system of collection, transportation, and treatment/disposal.
- **Legal Gaps**: The current laws do not cover hazardous waste management from small enterprises that do not qualify as factories under the Factory Act (No. 2) B.E. 2562.
- **Lack of Knowledge among SMEs**: Small and medium-sized enterprises lack understanding of hazardous waste management laws. They either lack personnel or frequently change the personnel responsible for waste management. Additionally, the cost burden of disposing/treating hazardous waste is high, particularly for hazardous waste. (PCD, 2023b).

2.3 Wastewater

As the Thailand economy continues to grow, the increase in industrial activities, urbanisation and population growth has led to significant pressure on water and wastewater management systems resulting in environmental and social negative impacts such as public health risks, water pollution, and also economic impacts on tourism, fishing and agriculture.

In 2019, Thailand produced around 9.99 million cubic meters of community wastewater daily, with an average individual contribution of 150 litres (PCD, 2023). Thailand National Strategic Plan 2018-2037, Issue 18 sets a goal to ensure that 90% of the surface water, groundwater, and sea water are of a quality suitable for use by 2037. However, in 2019 only 5% of the water sources met the quality standards for their respective uses. A significant cause of this is the discharge of

wastewater and sewage from communities, agriculture, and industry, with most of the pollution originating from communities, especially in densely populated areas (PCD, 2023).

Community wastewater management from households and buildings primarily involves reducing contamination through the installation of grease traps and/or onsite wastewater treatment systems, mostly anaerobic systems such as sedimentation ponds, and anaerobic filter tanks. Mostly, only sewage is treated, allowing wastewater from other activities like kitchen water, bathing water, and laundry water to be discharged directly into the environment. For large buildings, aerated treatment systems are often used to treat wastewater to meet specified discharge standards (PCD, 2017). Of treated water, 27% takes place at central wastewater treatment plants while onsite wastewater treatment plants manage the remaining 73% (MONRE, 2022).

Similarly, wastewater management in the industrial and agricultural sectors remains ineffective. Challenges to improvement include the complexity of wastewater treatment technologies, a shortage of skilled personnel in wastewater management, and the need for large areas to deploy simple wastewater treatment solutions. This is further complicated by the reliance on traditional community practices and seasonal variations in production. The underutilized wastewater treatment system, designed for future demands, is experiencing reduced efficiency due to prolonged retention times (PCD, 2023).

Thailand's 20-Year Master Plan on Water Resources Management (2023–2040), updated by the Office of National Water Resources (ONWR) focuses on five key areas:

- Consumption Management – Expand and upgrade water systems for 7.2 million households;
- Water security for Production – Supply water to 915,200 hectares of rain-fed agriculture;
- Flood and Inundation Management – Improve waterways, dams and manage flood-prone zones
- Ecosystem Conservation and Restoration – Restore 220,000 hectares of watershed forests and build 759 wastewater treatment facilities;
- Management and Organizational Development – strengthen policies, data integration, and community participation (MONRE, 2024).

The management of industrial wastewater involves measures aligned with NDC goals to reduce GHG emissions. These measures include increasing biogas production from industrial wastewater by reusing methane gas, in accordance with the Alternative Energy Development Plan 2015 – 2036. The AEDP2015 aims to utilise biogas from various sources, including industrial wastewater, agricultural waste, and community waste, for electricity and heat generation (EPPO, 2016).

The impacts of waste, along with the current state and outlook of waste management in Thailand, underscore the critical need for robust waste management systems that fit to local context. This necessitates engagement with both private and public sectors, as well as the public. The Thailand Taxonomy for waste management aims to encourage and incentivize greener waste management practices and infrastructure, with the goal of supporting Thailand in achieving its national targets related to waste management.

Interoperability with international taxonomies

In response to the environmental demands of waste management in Thailand, a range of economic activities have been considered for including in the Thailand Taxonomy. These economic activities were considered with due consideration to interoperability with international activities. Most specifically, the water supply, sewerage, waste management and remediation sector of the EU Taxonomy and Singapore (SG) Taxonomy. As of April 2024, ASEAN Taxonomy had not yet developed criteria for Waste Management Activities.

The master list of activities is derived from EU Taxonomy and Singapore Taxonomy. Activities are then selected based on the following rationale:

1. Substantial contribution to environmental objectives;
2. Materiality of activity to Thailand's economy;
3. Existence in other taxonomies.

While some activities can be adopted to allow interoperability, other activities need adaptation to meet the local context of Thailand. Irrelevant activities are excluded from the list. The activities

which require a broader outreach to stakeholder outside the Waste Management Working Group is set aside for the next phase.

The summary of comparison of EU and Singapore Taxonomy economic activities is in Annex II.

Proposed Thailand Taxonomy waste management activities

Thirteen activities have been proposed for Thailand Taxonomy Waste Management Sector, with the majority of these activities referring to the EU Taxonomy to ensure interoperability.

Table 3 lists the 13 proposed economic activities for the Waste Management Sector in the Thailand Taxonomy, where they correspond to each of these Environmental Objectives (EOs):

- EO1 – Climate Change Mitigation
- EO2 – Climate Change Adaptation
- EO3 – Sustainable Use and Protection of Marine and Water Resources
- EO4 – Resource Resilience and Transition to a Circular Economy
- EO5 – Pollution Prevention and Control
- EO6 – Protection and Restoration of Biodiversity and Ecosystems

Table 2: Proposed Taxonomy Waste Management Activities

Ref	Proposed Activity (ENG)	EO1	EO2	EO3	EO4	EO5	EO6
1	Anaerobic digestion of bio-waste or wastewater **(ISIC 3821, 3700)**	✓	X	X	✓	X	X
2	Composting of bio-waste **(ISIC3821)**	X	X	X	✓	X	X
3	Collection and transport of waste **(ISIC 381)**	X	X	X	✓	✓	X
4	Depollution and dismantling of end-of-life products **(ISIC 383)**	X	X	X	✓	X	X
5	Waste to Energy (WtE) **(ISIC 3821, 3822)**	✓	X	X	X	X	X
6	Landfill gas capture and utilisation **(ISIC 3821)**	✓	X	X	X	X	X
7	Remediation of contaminated sites and areas **(ISIC 390, 3320, 431, 711)**	X	X	X	X	✓	X
8	Remediation of legally non-conforming landfills and abandoned or illegal waste dumps **(ISIC 390, 382, 383)**	X	X	X	X	✓	X

Ref	Proposed Activity (ENG)	EO1	EO2	EO3	EO4	EO5	EO6
9	Sorting and material recovery from non-hazardous waste **(ISIC 3830)**	X	X	X	✓	X	X
10	Treatment of hazardous waste **(ISIC 3822)**	X	X	X	✓	✓	X
11	Construction, extension, upgrade, operation and renewal of decentralised wastewater collection and treatment **(ISIC 3700)**	X	✓	✓	✓	X	X
12	Construction, extension, upgrade and operation of centralised wastewater collection and treatment **(ISIC 3700)**	✓	✓	X	X	X	X
13	Renewal of centralised wastewater collection and treatment **(ISIC 3700)**	✓	✓	X	X	X	X

The majority of waste management activities can contribute to EO4 - Resource Resilience and Transition to Circular Economy and EO5 - Pollution Prevention and Control.

Some activities can contribute to EO1 Climate Change Mitigation by reducing GHG emissions through waste prevention, waste separation, reuse and recycling. However, the TSC for EO1 of Waste Management activities do not take the form of emissions thresholds as the Waste Management sector mainly enables other sectors of the economy to reduce GHG emissions through waste prevention, waste separation, reuse and recycling.

Also, some activities can contribute to EO2 – Climate Change Adaptation as these relate specifically to wastewater management, an activity which may be particularly stressed by the effects of climate change.

One activity in this sector can contribute to EO3 - Sustainable Use and Protection of Marine and Water Resource, specifically in relation to the construction, extension, upgrade, operation and renewal of urban wastewater collection and treatment. It will be noted that no TSC have been set in this sector for EO6 – Protection and Restoration of Biodiversity and Ecosystems. It is generally assumed that activities in this sector are not directly related to this EO, although indirect benefits to biodiversity will result from promotion of other EOs (e.g. EO3 and EO5).

The scope of waste and wastewater encompasses discharge points after waste has been produced such as farm gates, house gates, and factory gates. Consequently, residues that can be reused or recycled on-site, such as small-scale fertilisation production from agricultural

residue compost, are not considered waste but contribute to the Circular Economy Environmental Objective of the specific activity.

In Thailand, valuable waste such as plastic, WEEEs, glass and paper are collected at many different levels due to their economic value. Informal collectors include scavengers, motorbikes or vehicles that are not authorized by local administrative authorizations to conduct the activity of waste collection or transport. In addition to the informal garbage collectors, the formal garbage collectors also collect valuable waste. The valuable waste is then sold to the waste shops. When the TSC refers to "intermediate sorting facilities", this may include informal and/or formal garbage collectors.

Apart from this, the scope of Thailand Taxonomy Waste Management covers also Wastewater Management including decentralised wastewater (on-site treatment and cluster treatment), and centralised wastewater treatment.

Figure 9 Solid Waste Management Activities proposed for Thailand Taxonomy Waste Management

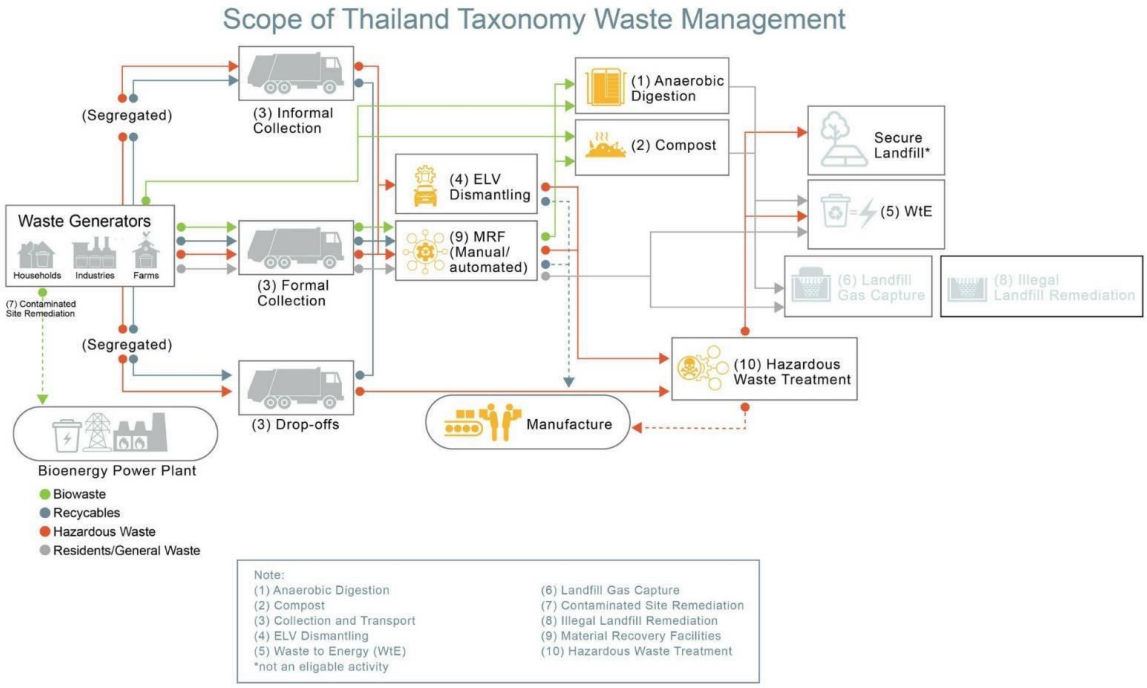
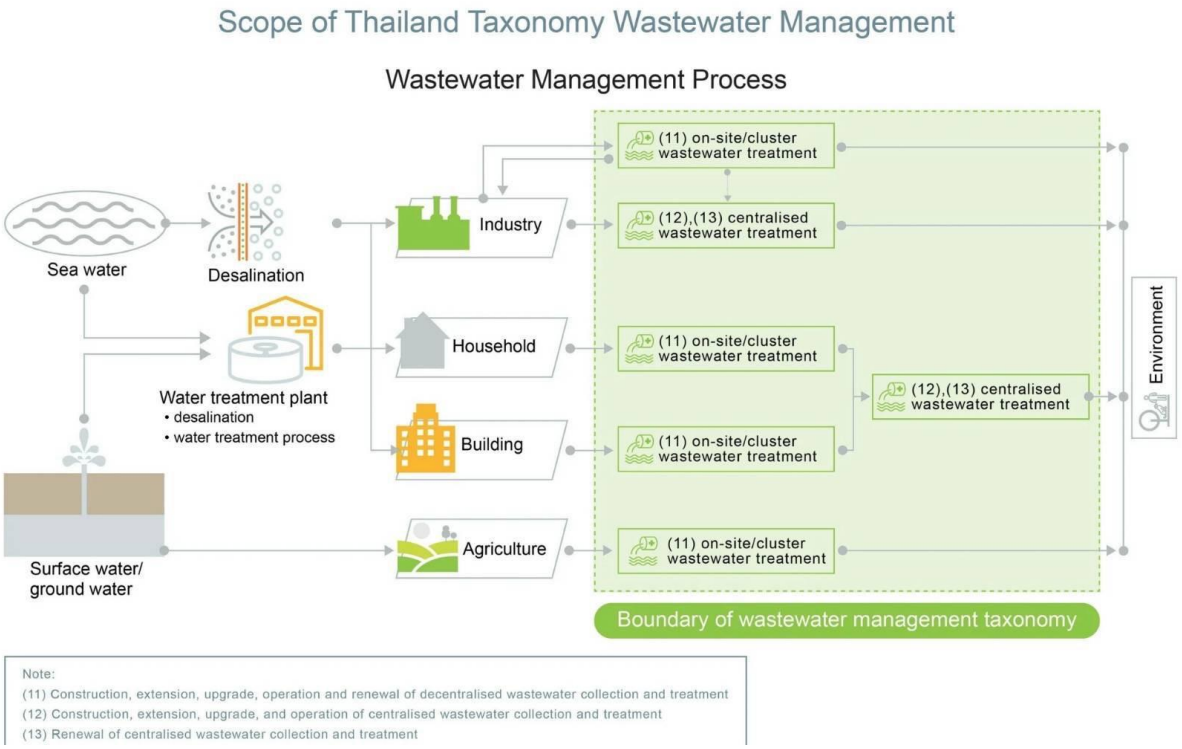


Figure 10 Wastewater Management Activities proposed for Thailand Taxonomy Waste Management



Guiding principles for setting technical screening criteria (TSC)

This section explains the considerations which guided the setting of Green TSC at each Environmental Objective.

1. Guiding Principles for TSC setting in EO1: Climate Change Mitigation

An activity shall be considered as fulfilling the objective of Climate Change Mitigation (EO1) if it contributes to one or more the following:

1. Avoids GHG emissions
2. Reduces GHG emissions; or
3. Enables others to avoid or reduce GHG emissions

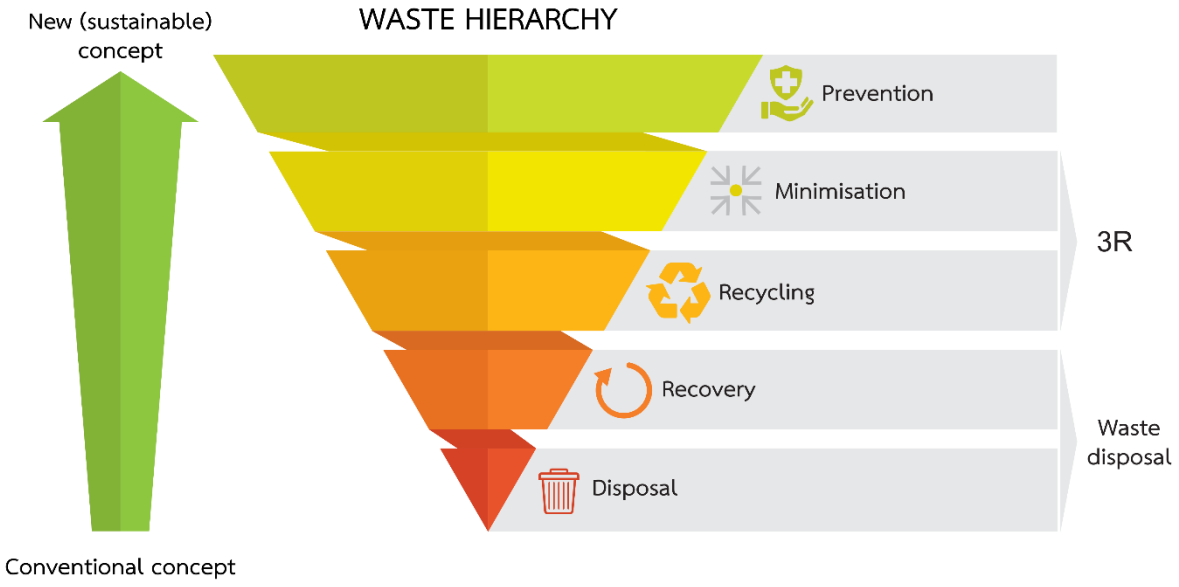
EO1 TSC for Waste Management does not take the form of emissions thresholds as Waste Management is the sector that enables other sectors of the economy to reduce GHG emissions through waste prevention, waste separation, reuse and recycling. The climate

mitigation impact of waste management is inherently linked to the nature of its business models. As a result, the climate mitigation criteria are primarily focused on qualitative metrics that ensure the effective implementation of strategies aimed at maximizing operational efficiency and minimizing life cycle emissions.

The criteria for the Waste Sector focus on the procedural steps, refers to the waste management hierarchy which prioritises Prevention over Reuse, followed by Recycling, Recovery and Disposal. In the areas where legal enforcement needs to be strengthened, compliance with law is set as Green TSC to increase recycling rate, and to mitigate potential negative environmental or social effects.

Material recovery is prioritised over energy recovery. As an example, digestate or compost is used as fertiliser or soil improver or secondary raw material for construction as permitted by the applicable regulations. If material recovery is not permitted or not feasible, then incineration of digestate or compost for energy recovery is permitted. Material recovery contributes to EO4 due to replacement of virgin materials. Energy recovery contributes to EO1 due to methane avoided from landfill diversion.

Figure 11 Waste Management Hierarchy (PCD, 2023b)



2. Guiding Principles for TSC setting in EO2: Climate Change Adaptation

An activity shall be considered as fulfilling the objective of Climate Change Adaptation (EO2) if it contributes in one or more of the following:

1. Activity shall positively contribute to a reduction in material physical climate risk and/or shall reasonably reduce material physical risk from current and future climate change. This can include obvious physical risks, such as flooding, but also less immediately visible effects, such as impact on health from higher temperatures.
2. Impact assessments under a broad range of climate scenarios shall be conducted to provide better understanding and insights on the effectiveness and benefits of the Activity.
3. Activity that enables adaptation of other Activities should reduce the impact of material physical risk from other Activities and/or reduce barriers to adaptation through technology, services or products.
4. Activity must not adversely affect the adaptation efforts, or increase the physical risk, of other stakeholders.
5. Adaptation solutions should be location-specific and context-specific and shall be assessed and ranked in order of priority using the best available climate projections in order to prevent and/or reduce the adverse impact on people, nature or assets.

3. Guiding Principles for TSC setting in EO3: Sustainable use of Marine and Water Resources

An activity shall be considered as fulfilling the objective of Sustainable use of Marine and Water resources (EO3) if it contributes to achieving good environmental status of bodies of water, through protection, preservation, or restoration mechanisms, including improving water management and efficiency activities, as well as promoting the sustainable use of water through the long-term protection of available water resources.

4. Guiding Principles for TSC setting in EO4: Resource Resilience and Transition to a Circular Economy

An activity intended to promote EO4 shall fulfil some or all the principles:

Strategy & Operations, Adjusting Business Models:

1. Uses renewable energy, bio-based resources, or other recovered materials to reduce rate of resource extraction.

2. Uses future-proof, sustainable considerations and specifications to design and produce products, assets or process technologies that enable circular economy strategies through:
    a. Designing for longevity, resource efficiency, durability, functionality, modularity, upgradability, easy disassembly, and repair;
    b. Using recyclable or biodegradable materials;
    c. Replacing substances in materials and products throughout their lifecycle with safer alternatives, where applicable, and promoting traceability.
3. Optimises waste management, including the management and reduction of waste from (i) the extraction of minerals, and (ii) the construction and demolition of buildings.
4. Optimises resource use and/or extends product use, including through:
    a. Replacement of virgin materials with secondary raw materials or by-products, either fully or partially;
    b. Repair, reuse, donation, resale, upcycling activities or on-site composting;
    c. Repurposing, refurbishing, remanufacturing, disassembling, upgrading and repairing, and sharing of products.
5. Offers product as a service based on, inter alia, leasing, pay-per-use, subscription, or deposit return schemes to reduce the demand for new products and their embedded raw materials.
6. Provides for cleaner and more efficient options for waste disposal, including minimising disposal to landfills.

Enablers: Facilitating the Transition

1. Develops and/or improves resource optimisation / waste management infrastructure needed for re-use and recycling to increase resource efficiency and ensure recovered materials are recycled as high-quality secondary raw material.
2. Invests in the creation of a research and development (R&D) and knowledge sharing platform to increase expertise in circular economy and/or execute circular economy related pilot projects.

5. Guiding Principles for TSC setting in EO5: Pollution Prevention and Control

An activity shall be considered as fulfilling the objective of Pollution prevention and control (EO5) if it contributes to environmental protection from pollution by improving levels of air, water, and/or land quality, including the cleaning up of litter and other pollution.

6. Guiding Principles for TSC setting in EO6: Protection and Restoration of Biodiversity and Ecosystem

An activity intended to promote EO6 shall conform with the following principles while simultaneously minimising or eliminating any direct or indirect adverse effects on the natural ecosystem and biodiversity:

1. Enable ecosystem restoration and/or facilitate the protection of ecosystems.
2. Implement necessary measures to protect ecosystems and biodiversity, including but not limited to, actions such as the adoption of sustainable logging practices and ensuring timber products are sourced from sustainably managed forests.
3. Enforce and empower existing policies related to the protection of natural areas.
4. Take into consideration the sustainable and equitable use of biodiversity and ecosystem services.

TSC for waste management activities

With respect to comparisons of the Thailand Taxonomy criteria and international best practice/reference taxonomies, note the following general points[2]:

1. The codes EO1 – EO6 have the meanings defined in the Thailand Taxonomy. Where comparisons are made, the code may refer to a comparable EO in another taxonomy, regardless of the coding system used in that other taxonomy.
2. Comparisons are not made in the following cases:
    a. **Amber – EU Taxonomy**: The EU Taxonomy does not set amber criteria for any EO.

[2] Points refer to the situation as of March 2025.

b. **EOs other than EO1 – Singapore (SG) Taxonomy**: The SG Taxonomy does not set criteria for any EO other than 'climate mitigation' (equivalent to EO1).

3. The EU Taxonomy establishes green criteria for certain activities that, "contribute to overall local, national or regional resilience" (equivalent to EO2). In contrast, the Thailand Taxonomy sets TSC for EO2 only for activities primarily aimed at providing climate change adaptation services to broader society or the economy, such as flood management. To avoid misclassification under green or amber based solely on an activity's climate resilience, only these specific activities can be classified under EO2. It is important to note that any activity assessed as green or amber under any other EO must demonstrate DNSH to EO2, making climate resilience a minimum requirement.

4. Whilst the EU Taxonomy refers to EU Directives and Regulations, the Thailand Taxonomy refers to national laws, international standards or best practice.

1. Anaerobic digestion of bio-waste or wastewater

Sector	Waste Management
Activity	Anaerobic digestion of bio-waste or wastewater
ISIC Code	3821, 3700
Description	Construction and operation of facilities for the treatment of separately collected bio-waste including sewage sludge and wastewater by anaerobic digestion with the resulting production and utilisation of biogas, digestate or chemicals.
Objective	- EO1: Climate Change Mitigation - EO4: Resource Resilience and Transition to a Circular Economy

Tiers	**EO1: Climate Change Mitigation**	**Reference with international best practice/reference taxonomies**
Green	1. The bio-waste that is used for anaerobic digestion is segregated at source (i.e., before formal collection) and collected separately; AND 2. A monitoring and contingency plan is in place in order to minimise methane leakage at the facility; AND	Aligned to EU and SG Taxonomy criteria. However, note that segregation of woody waste is covered in the

	3. The produced biogas is used directly for the generation of electricity or heat, or upgraded to bio-methane for injection in the natural gas grid, or used as vehicle fuel, or as feedstock in the chemical industry; AND 4. The produced digestate: a. from biowaste (excluding sewage sludge) from single digestion facilities is used as fertiliser or soil improver, either directly or after composting, or any other treatment as permitted by the applicable regulations; AND/OR b. from anaerobic digestion of sewage sludge or co-digestion facilities will be further processed as permitted by the applicable regulations, prioritising material recovery over energy recovery.	Thailand Taxonomy at EO4.
Amber	1. The bio-waste is segregated at source (i.e., before formal collection), or at an intermediate sorting facility, or at anaerobic digestion facility; AND 2. The rejects from segregation are disposed of at Taxonomy-eligible facilities (Green or Amber); AND 3. A monitoring and contingency plan is in place in order to minimise methane leakage at the facility; AND 4. Produced biogas is flared directly without utilization of energy, whilst avoiding the release of incomplete combustion products, such as carbon monoxide (CO) or particulate matter (PM), into the atmosphere; AND 5. The produced digestate: a. from biowaste (excluding sewage sludge) from single digestion facilities is used as fertiliser or soil improver, either directly or after composting, or any other treatment as permitted by the applicable regulations; AND/OR	Aligned to SG Taxonomy criteria

	b. from anaerobic digestion of sewage sludge or co-digestion facilities will be further processed as permitted by the applicable regulations, prioritising material recovery over energy recovery; AND 6. The sunset date for activities classified under these Amber criteria is 31 December 2029	
Red	Does not meet Green or Amber criteria	
Applicable standards/ Best Practice Examples	1. Regulations for the detection and elimination of gas leaks should demonstrate due consideration of the Methane Guiding Principles (Link) 2. GHG Reduction Enhancement Project from Wastewater and Sludge from Community Integrated Wastewater Treatment System PCD 02-321 Book 1/3 (Link) 3. Guidelines and Measures to promote the use of effluent and sludge from PCD 02-321 Book 2/3 (Link) 4. Environmentally friendly low-carbon community wastewater management technologies and good practices (Link)	

Tiers	**EO2: Climate Change Adaptation**	**Reference with international best practice/reference taxonomies**
Green	No TSC available	See notes at the start of this section (TSC for waste management activities)

Tiers	**EO3: Sustainable Use and Protection of Marine and Water Resources**	**Reference with international best practice/reference taxonomies**
Green	No TSC available	Not applicable

Tiers	EO4: Resource Resilience and Transition to a Circular Economy	Reference with international best practice/reference taxonomies
Green	1. The bio-waste that is used for anaerobic digestion is segregated at source (i.e., before formal collection) and collected separately; AND 2. A monitoring and contingency plan is in place in order to minimise methane leakage at the facility; AND 3. The produced biogas is used directly for the generation of electricity or heat, or upgraded to bio-methane for injection in the natural gas grid, or used as vehicle fuel, or as feedstock in the chemical industry; AND 4. The activity produces at least one of the following: a. Digestate from biowaste (excluding sewage sludge) from single digestion facilities is used as fertiliser or soil improver, either directly or after composting, or any other treatment as permitted by the applicable regulations. Burning is not allowed; AND/OR b. Digestate from sewage sludge or co-digestion facilities which will be further processed for material recovery as permitted by the applicable regulations. Burning is not allowed; AND/OR c. Chemicals through the conversion of organic waste to carboxylates, carboxylic acids or polymers by fermentation with mixed cultures; AND 5. Woody waste is segregated before or after processing and sent to an eligible treatment plant (such as composting or biomass-based energy plants).	Aligned to EU Taxonomy criteria. Aligned to SG Taxonomy criteria (EO1 equivalent).

Amber	1. The bio-waste is segregated at source (i.e., before formal collection) or, at an intermediate sorting facility, or at anaerobic digestion facility; AND 2. The rejects from the intermediate sorting facility or facility are disposed of at Taxonomy-eligible facilities (Green or Amber); AND 3. A monitoring and contingency plan is in place in order to minimise methane leakage at the facility; AND 4. Produced biogas is flared directly without utilization of energy. Avoid the release of incomplete combustion products such as carbon monoxide (CO) and particulate matter (PM) into the atmosphere; AND 5. The produced digestate: a. from biowaste (excluding sewage sludge) from single digestion facilities is used as fertiliser or soil improver, either directly or after composting, or any other treatment as permitted by the applicable regulations;, AND/OR b. from sewage sludge or co-digestion facilities will be further processed as permitted by the applicable regulations, prioritising material recovery over energy recovery; AND 6. The sunset date for activities classified under these Amber criteria is 31 December 2029.	Aligned to SG Taxonomy criteria (EO1 equivalent)
Red	Does not meet Green or Amber criteria	
Applicable Standards/ Best Practice Examples	1. Regulations for the detection and elimination of gas leaks should demonstrate due consideration of the Methane Guiding Principles (Link) 2. Refer to Department of Primary Industries and Mine's Sludge Input Criteria 3. ISO 19698:2020 Sludge recovery, recycling, treatment and disposal – beneficial use of biosolids – land application	

Tiers	EO5: Pollution Prevention and Control	Reference with international best practice/reference taxonomies
Green	No TSC available	Not applicable

Tiers	EO6: Protection and Restoration of Biodiversity and Ecosystem	Reference with international best practice/reference taxonomies
Green	No TSC available	Not applicable

2. Composting of bio-waste

Sector	Waste Management
Activity	Composting of bio-waste
ISIC Code	3821
Description	Construction and operation of dedicated facilities for the treatment of separately collected bio-waste through aerobic digestion with the resulting production and utilisation of compost.
Objective	EO4: Resource Resilience and Transition to a Circular Economy

Tiers	EO1: Climate Change Mitigation	Reference with international best practice/reference taxonomies
Green	No TSC available	Thailand Taxonomy sets criteria at EO4 for this activity.

Tiers	EO2: Climate Change Adaptation	Reference with international best practice/reference taxonomies
Green	No TSC available	See notes at the start of this section (TSC for waste

		management activities)

Tiers	EO3: Sustainable Use and Protection of Marine and Water Resources	Reference with international best practice/reference taxonomies
Green	No TSC available	Not applicable

Tiers	EO4: Resource Resilience and Transition to a Circular Economy	Reference with international best practice/reference taxonomies
Green	1. The bio-waste that is composted is segregated at source (i.e., before formal collection) and collected separately; AND 2. The produced compost is used as fertiliser or soil improver as permitted by the applicable regulations; AND 3. Efficient operations ensure avoidance of methane leakage; AND 4. Measures to prevent and mitigate odour and water pollution from leachate are in place	Aligned to EU Taxonomy criteria. Aligned to SG Taxonomy criteria (EO1 equivalent).
Amber	1. The bio-waste is segregated at an intermediate sorting facility, or at composting facility; AND 2. The rejects from segregation are disposed of at Taxonomy-eligible facilities (Green or Amber); AND 3. The produced compost is used as fertiliser or soil improver as permitted by the applicable regulations; AND 4. Efficient operations ensure avoidance of methane leakage; AND 5. Measures to prevent and mitigate odour and water pollution from leachate are in place	Aligned to SG Taxonomy criteria (EO1 equivalent)
Red	Does not meet Green or Amber criteria	

Applicable standards/ Best Practice Examples	1. Fertiliser production from bio-waste compost handbook PCD 04-117 (Link) 2. Announcement from Pollution Control Department regarding the criteria for construction and management of municipal solid waste composting facilities (Link)	

Tiers	EO5: Pollution Prevention and Control	Reference with international best practice/reference taxonomies
Green	No TSC available	Not applicable

Tiers	EO6: Protection and Restoration of Biodiversity and Ecosystem	Reference with international best practice/reference taxonomies
Green	No TSC available	Not applicable

3. Collection and transport of waste

Sector	Waste Management
Activity	Collection and Transport of Waste
ISIC Code	381
Description	Separate collection and transport of hazardous and non-hazardous waste aimed at preparing for re-use or recycling, including the construction, operation and upgrade of facilities involved in the collection and transport of such waste, as a means for material recovery or appropriate treatment. The activity includes operation of waste collection containers, transfer stations, all types of transportation vehicles, ICT solutions, and other related infrastructure. Note: 1. Municipal Solid Waste consists of general waste[3], municipal hazardous waste[4], infectious waste[5], recyclable waste[6], and bio-waste.

[3] Ministerial Regulation on General Waste Management B.E. 2560

[4] Ministerial Regulation on Hazardous Waste Management from Communities B.E. 2563

[5] Ministerial Regulation on Infectious Waste Management B.E. 2545

[6] Ministerial Regulation on General Waste Management B.E. 2560

	2. Industrial Waste[7] means unusable materials or all types of wastes including hazardous and non-hazardous waste generated from industrial activity. 3. Transportation of Municipal Hazardous Waste and/or Industrial Hazardous Waste to disposal may contribute to EO5 only when recovery (EO4) is not permitted by law. 4. Freight transport vehicles used for this activity are not required to meet the EO1 GHG emissions standards set in the Transport sector of the Thailand Taxonomy, as this activity is not classified under EO1. However, vehicles must comply with **Transportation Requirements** according to applicable regulations which include but not limit to: 4.1 Air pollution emissions comply with applicable regulatory thresholds; and 4.2 Leachate spills are prevented during transportation by a container (holding tank); and 4.3 Waste is securely covered to prevent spillage during transportation.
Objective	- EO4: Resource Resilience and Transition to a Circular Economy [Municipal Solid Waste] and [Industrial Waste]; - EO5: Pollution Prevention and Control [Crop residues waste], [Industrial Hazardous Waste], and [Municipal Hazardous Waste]

Tiers	**EO1: Climate Change Mitigation**	**Reference with international best practice/reference taxonomies**
Green	No TSC available	Thailand and EU Taxonomies set criteria at EO4, and not EO1 for this activity. SG Taxonomy sets criteria at EO1. See EO4 for comparison.

[7] Ministry of Industry Announcement on the Disposal of Refuse or Unused Materials (Issue 3), B.E. 2566

Tiers	EO2: Climate Change Adaptation	Reference with international best practice/reference taxonomies
Green	No TSC available	See notes at the start of this section (TSC for waste management activities)

Tiers	EO3: Sustainable Use and Protection of Marine and Water Resources	Reference with international best practice/reference taxonomies
Green	No TSC available	Not applicable

Tiers	EO4: Resource Resilience and Transition to a Circular Economy	Reference with international best practice/reference taxonomies
Green	**[Municipal Solid Waste:** • **Non-Hazardous Waste transportation from source to disposal point;** • **Hazardous Waste transportation from source to storage point only; transportation from storage point to disposal point is covered under EO5].** 1. Before 31 December 2029, waste is segregated at source (i.e., before formal collection), or at an intermediate sorting facility into the following waste streams: general waste, municipal hazardous waste, recyclable waste, bio-waste, and infectious waste (where applicable). Collection and transportation of specific segregated waste stream(s) is eligible; AND 2. After 31 December 2029, waste is segregated at source (i.e., before formal collection) into the following waste streams: general waste, municipal hazardous waste,	Aligned to EU Taxonomy criteria except EU Taxonomy does not allow sorting at intermediate or waste collection or transport facility. For non-hazardous waste, it is aligned to SG Taxonomy criteria (EO1 equivalent)

	recyclable waste, bio-waste, and infectious waste (where applicable). Collection and transportation of specific segregated waste stream(s) is eligible; AND 3. Waste is transported to a location with the intention of preparation for material recovery (reuse or recycling) or energy recovery (WtE), ensuring material recovery is prioritised over energy recovery. If recovery of waste is not permitted by law, it must be transported to a location with the intention of waste disposal by a competent waste treatment facility; AND 4. The transportation vehicle conforms to Transportation Requirements set out in Description Note 4 of this Activity; AND 5. For WEEE: a. collection and transport preserve the integrity of WEEE and prevent the leakage of hazardous substances such as ozone-depleting substances, fluorinated greenhouse gases or mercury contained in fluorescent lamps; AND b. A management system to manage environmental, health and safety risks is in place; AND c. WEEE is delivered to a legally approved waste management facility. **[Industrial Waste – Hazardous & Non-Hazardous from source to recovery point]** 1. Waste is segregated at source (i.e., before formal collection); AND 2. Waste is transported to a location with the intention of preparation for material recovery (reuse or recycling) or energy recovery, ensuring material recovery is prioritised over energy recovery;	

	AND 3. The transportation vehicle conforms to Transportation Requirements set out in Description Note 4 of this Activity.	
Amber	**[Municipal Solid Waste:** • **Non-Hazardous Waste transportation from source to disposal point; and** • **Hazardous Waste transportation from source to storage point]** 1. Waste is segregated at an intermediate sorting facility into the following waste streams: general waste, municipal hazardous waste, recyclable waste, bio-waste, and infectious waste (where applicable); AND 2. Waste is transported to a location with the intention of preparation for material recovery (reuse or recycling) or energy recovery (WtE), ensuring material recovery is prioritised over energy recovery. If recovery of waste is not permitted by law, it must be transported to a location with the intention of waste disposal by a competent waste treatment facility; AND 3. The transportation vehicle conforms to Transportation Requirements set out in Description Note 4 of this Activity; AND 4. For WEEE: a. collection and transport preserve the integrity of WEEE and prevent the leakage of hazardous substances such as ozone-depleting substances, fluorinated greenhouse gases or mercury contained in fluorescent lamps; AND b. A management system is set up by the collection and logistics operator to manage environmental, health and safety risks; AND c. WEEE is delivered to a legally approved waste management facility.	Aligned to SG Taxonomy criteria for (EO1 equivalent) non-hazardous waste collection and transport.

	[Industrial Waste – Hazardous & Non-Hazardous] No TSC available	
Red	1. Does not meet Green or Amber criteria; OR 2. Waste is transported to ineligible WtE, or ineligible bioenergy plant, or unapproved waste management facility, or directly disposed to landfill.	
Applicable standards/ Best Practice Examples	1. DLA's Waste Bank Project: 2. Household and Office Waste Segregation and Waste Reduction E-book (Link)	

Tiers	**EO5: Pollution Prevention and Control**	**Reference with international best practice/reference taxonomies**
Green	**[Crop Residues Waste]** 1. Collection, transport, storage, and delivery of crop residues that are segregated at source (i.e., before formal collection), or at an intermediate sorting facility, to a location with the intention of preparation for material recovery (reuse or recycling) or Taxonomy-eligible energy recovery (Green or Amber bioenergy power plants), ensuring crop residues waste is not burned in an open space; AND 2. The transportation vehicle conforms to Transportation Requirements set out in Description Note 4 of this Activity. **[Transport of:** • **Industrial Hazardous Waste from source to disposal point; and** • **Municipal Hazardous Waste from storage point to disposal point]** 1. Collection, transport, storage and delivery of hazardous waste to the permitted treatment facility is managed	**[Crop residues waste]** Thailand specific **[Industrial Hazardous Waste from source to disposal, and Municipal Hazardous Waste from storage point to disposal]**

	according to applicable national and international legislations: a. Hazardous waste is segregated at source (i.e. before formal collection) and collected separately from non-hazardous waste, is not mixed nor diluted either with other materials; AND b. Proper collection and handling prevent leakage of hazardous waste during collection, transport, storage and delivery to the permitted treatment facility; AND c. During collection and transport, hazardous waste is packaged and labelled; AND d. The operator collects record of hazardous waste including quantity, nature, origin, destination, frequency of collection, mode of transport and treatment method; AND e. Where a given waste classified as hazardous has also a transport status of dangerous goods under the Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), the transport complies with the relevant requirements set by the ADR; AND f. When the waste is stored, the activity complies with the requirements set out in national law; AND g. Rehearsal of hazardous waste spill emergency response plan and inspection of necessary equipment is conducted at the frequency identified by national regulations; AND h. The transportation vehicle is installed with a GPS tracking system, vehicle logbook, and transportation	Aligned to EU Taxonomy criteria

	document for at least 1 year or as identified by national regulations; AND 2. The transportation vehicle conforms to Transportation Requirements set out in Description Note 4 of this Activity; AND 3. For WEEE: a. collection and transport preserve the integrity of WEEE and prevent the leakage of hazardous substances such as ozone-depleting substances, fluorinated greenhouse gases or mercury contained in fluorescent lamps; AND b. A management system is set up by the collection and logistics operator to manage environmental, health and safety risks; AND c. WEEE is delivered to a legally approved waste management facility for dismantling and stripping.	
Amber	No TSC available	
Red	1. Does not meet Green or Amber criteria; OR 2. Waste is transported to ineligible WtE, or ineligible bioenergy plant, or unapproved waste management facility, or directly disposed to landfill.	
Applicable standards/ Best Practice Examples	1. Best Practice for WEEE waste transportation: refer to CLC/EN 50625-1:2014 and CLC/TS 50625-4:2017 2. PCD Manual for the transportation of hazardous waste from local communities under the administration of local government organizations to disposal point (Link)	

Tiers	**EO6: Protection and Restoration of Biodiversity and Ecosystem**	**Reference with international best practice/reference taxonomies**
Green	No TSC available	Not applicable

4. Depollution and dismantling of end-of-life products

Sector	Waste Management
Activity	Depollution and dismantling of end-of-life-products
ISIC Code	383
Description	Construction, operation and upgrade of facilities dismantling and depolluting complex end-of-life products, movable assets and their components for materials recovery or preparation for re-use of components. The economic activity includes the dismantling of end-of-life products and movable assets and their components of any type, such as automobiles, ships and electrical and electronic equipment (EEE) for material recovery. The economic activity does not include the treatment of batteries stemming from separate collection or removed during dismantling and depollution activities, and the demolition and wrecking of buildings and other structures which belongs to Construction Sector.
Objective	EO4: Resource Resilience and Transition to a Circular Economy

Tiers	**EO1: Climate Change Mitigation**	**Reference with international best practice/reference taxonomies**
Green	No TSC available	Not applicable

Tiers	**EO2: Climate Change Adaptation**	**Reference with international best practice/reference taxonomies**
Green	No TSC available	See notes at the start of this section (TSC for waste management activities)

Tiers	**EO3: Sustainable Use and Protection of Marine and Water Resources**	**Reference with international best practice/reference taxonomies**
Green	No TSC available	Not applicable

Tiers	EO4: Resource Resilience and Transition to a Circular Economy	Reference with international best practice/reference taxonomies
Green	1. The economic activity dismantles and depollutes separately collected waste, complex end-of-life products, such as automobiles, ships, or WEEE, in order to: a. harvest parts and components that are suited for re-use; AND b. separate non-hazardous and hazardous waste fractions suited for material recovery including recovery of critical raw materials; AND c. remove hazardous substances, mixtures and components, so that these are contained in an identifiable stream or that are an identifiable part of a stream within the treatment process, and send them to facilities permitted for proper treatment including disposal of hazardous waste; AND d. enclose documentation of the materials that are sent for further treatment or reuse; AND 2. The economic activity dismantling and depolluting complex end-of-life products, such as automobiles, ships, or WEEE, including waste originating from collection points, complies with at least the following standards: a. ISO 9001:2015 Quality Management Systems; AND b. ISO 14001:2015 Environmental Management Systems; AND c. ISO 45001:2018 Occupational health and safety management systems – Requirements with guidance for use.	Aligned to EU Taxonomy criteria.

Amber	1. The economic activity dismantles and depollutes separately collected waste, complex end-of-life products, such as automobiles, ships, or WEEE, in order to: a. harvest parts and components that are suited for re-use; AND b. separate non-hazardous and hazardous waste fractions suited for material recovery including recovery of critical raw materials; AND c. remove hazardous substances, mixtures and components, so that these are contained in an identifiable stream or that are an identifiable part of a stream within the treatment process, and send them to facilities permitted for proper treatment including disposal of hazardous waste; AND d. enclose documentation of the materials that are sent for further treatment or reuse;	Thailand specific
Red	Does not meet Green or Amber criteria	
Applicable standards/ Best Practice Examples	1. ISO 9001:2015 Quality Management Systems 2. ISO 14001:2015 Environmental Management Systems 3. ISO 45001:2018 Occupational health and safety management systems – Requirements with guidance for use 4. ISO 22628:2002 Road vehicles – Recyclability and recoverability 5. IEC 62635: Guidelines for End-of-Life Information provided by manufacturers and recyclers and for recyclability rate calculation of electrical and electronic equipment 6. UNEP E-Waste Management Manual (Link) 7. [For ship recycling] The Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships	

Tiers	EO5: Pollution Prevention and Control	Reference with international best practice/reference taxonomies
Green	No TSC available	Not applicable

Tiers	EO6: Protection and Restoration of Biodiversity and Ecosystem	Reference with international best practice/reference taxonomies
Green	No TSC available	Not applicable

5. Waste to Energy

Sector	Waste Management
Activity	Waste to Energy
ISIC Code	3821, 3822
Description	Generation of energy in the form of electricity and/or heat from pre-sorted residual waste (non-recyclable fraction of waste) incineration, including R&D investments related to developing and testing new and emerging technologies such as pyrolysis and gasification that can produce alternate and sustainable fuels or chemicals. Note: 1) Co-processing activity does not belong to WtE activity. Please refer to cement-manufacturing activity for criteria related to co-processing. 2) Input feedstock excludes agriculture residues which is covered under Thailand Taxonomy Phase I. Refer to Thailand Taxonomy Phase I for bioenergy power plant criteria.
Objective	EO1: Climate Change Mitigation

Tiers	EO1: Climate Change Mitigation	Reference with international best practice/reference taxonomies
Green	1. High quality recyclables and hazardous waste portion has been removed before entering the incineration process. Recyclables are sent for material recovery. Hazardous waste is sent for material recovery or appropriate disposal if recovery is not possible;	Aligned to SG Taxonomy criteria. The EU Taxonomy does not set criteria

	AND 2. Plant efficiency[8] is not less than 25%; AND 3. Partial Bottom ash recovery (in as much as permitted by national law) with at least 75% recovery of metal from ash. This activity could take place in an off-site location; AND 4. The bottom ash and fly ash management system is in place, ensuring no leakage of hazardous substances; AND 5. Pre-operational Waste-to-Energy (WtE) plant conducts a baseline environmental assessment, minimally addressing air quality and odour nuisance, prior to commencement of operations. The result is provided to stakeholder upon request. Operational WtE plant, upon stakeholder request, provides Energy Regulatory Commission audited Code of Practice Monitoring reports, including Continuous Emissions Monitoring Systems (CEMS) data; AND 6. WtE possesses a certified environmental management system, verified by a qualified third-party, that ensures effective pollution control and monitoring.	for this activity under any EO.
Amber	1. High quality recyclables and hazardous waste portion has been removed before entering the incineration process. Recyclables are sent to material recovery facilities and hazardous waste is sent to material recovery or hazardous waste treatment facilities; AND 2. Plant efficiency[9] is between 10% and 25%; AND	Aligned to SG Taxonomy criteria

[8] Plant efficiency is defined as (Electrical + Thermal Energy Output)/Energy Content of Waste, where 'Energy Output' means useful energy provided by the plant.

[9] Plant efficiency is defined as (Electrical + Thermal Energy Output)/Energy Content of Waste, where 'Energy Output' means useful energy provided by the plant.

	3. Partial Bottom ash recovery (in as much as permitted by national law) with at least 50% recovery of metal from ash. This activity could take place in an off-site location; AND 4. The bottom ash and fly ash management system is in place, ensuring no leakage of hazardous substances; AND 5. Pre-operational Waste-to-Energy (WtE) plant conducts baseline environmental assessment, minimally addressing air quality and odour nuisance, prior to commencement of operations. The result is provided to stakeholder upon request. Operational WtE plant, upon stakeholder request, provides Energy Regulatory Commission audited Code of Practice Monitoring reports, including Continuous Emissions Monitoring Systems (CEMS) data; AND 6. WtE possesses a certified environmental management system, verified by a third-party, that ensures effective pollution control and monitoring.	
Red	Does not meet Green or Amber criteria	
Applicable standards/ Best Practice Examples	PCD Guidelines for municipal solid waste management with WtE (Link)	

Tiers	**EO2: Climate Change Adaptation**	**Reference with international best practice/reference taxonomies**
Green	No TSC available	See notes at the start of this section (TSC for waste management activities)

Tiers	EO3: Sustainable Use and Protection of Marine and Water Resources	Reference with international best practice/reference taxonomies
Green	No TSC available	Not applicable

Tiers	EO4: Resource Resilience and Transition to a Circular Economy	Reference with international best practice/reference taxonomies
Green	No TSC available	Not applicable

Tiers	EO5: Pollution Prevention and Control	Reference with international best practice/reference taxonomies
Green	No TSC available	Not applicable

Tiers	EO6: Protection and Restoration of Biodiversity and Ecosystem	Reference with international best practice/reference taxonomies
Green	No TSC available	Not applicable

6. Landfill gas capture and utilisation

Sector	Waste Management
Activity	Landfill gas capture and utilisation
ISIC Code	3821
Description	Installation and operation of infrastructure for landfill gas capture and utilisation in permanently closed landfills or landfill cells using new or supplementary dedicated technical facilities and equipment installed during or post landfill or landfill cell closure.
Objective	EO1: Climate Change Mitigation

Tiers	EO1: Climate Change Mitigation	Reference with international best practice/reference taxonomies
Green	1. The landfill or landfill cell where the gas capture system is implemented is permanently closed and is not taking in further waste; AND 2. A monitoring and contingency plan is in place in order to minimise methane leakage at the facility; AND 3. The produced biogas is used directly for the generation of electricity or heat, or upgraded to bio-methane for injection in the natural gas grid, or used as vehicle fuel, or as feedstock in chemical industry.	Aligned to EU and SG Taxonomies
Amber	1. The landfill or landfill cell where the gas capture system is implemented is permanently closed and is not taking in further waste; AND 2. A monitoring and contingency plan is in place in order to minimise methane leakage at the facility; AND 3. The produced biogas is flared directly without use of energy, whilst avoiding the release of incomplete combustion products, such as carbon monoxide (CO) and particulate matter (PM), into the atmosphere; AND 4. The sunset date for an activity classified under the Amber criteria is 31 December 2029.	Aligned to SG Taxonomy criteria
Red	Does not meet Green or Amber criteria	
Applicable standards/ Best Practice Examples	Regulations for the detection and elimination of gas leaks should demonstrate due consideration of the Methane Guiding Principles (Link)	

Tiers	EO2: Climate Change Adaptation	Reference with international best practice/reference taxonomies
Green	No TSC available	See notes at the start of this section (TSC for waste management activities)

Tiers	EO3: Sustainable Use and Protection of Marine and Water Resources	Reference with international best practice/reference taxonomies
Green	No TSC available	Not applicable

Tiers	EO4: Resource Resilience and Transition to a Circular Economy	Reference with international best practice/reference taxonomies
Green	No TSC available	Not applicable

Tiers	EO5: Pollution Prevention and Control	Reference with international best practice/reference taxonomies
Green	No TSC available	Not applicable

Tiers	EO6: Protection and Restoration of Biodiversity and Ecosystem	Reference with international best practice/reference taxonomies
Green	No TSC available	Not applicable

7. Remediation of contaminated sites and areas

Sector	Waste Management
Activity	Remediation of contaminated sites and areas
ISIC Code	390, 3320, 431, 711

Description	The activity includes: 1. decontamination or remediation of soils and groundwater in the polluted area, either in situ or ex situ, in particular using physical, chemical or biological methods; 2. decontamination or remediation of contaminated industrial plants or sites; 3. decontamination or remediation of surface water and its shores following accidental pollution, such as through collection of pollutants or through physical, chemical or biological methods; 4. cleaning up oil spills and other types of pollutants on or in: a) surface water including rivers, lakes, coastal waters or transitional waters; b) groundwater; c) marine water; d) sediments (for all surface water types); e) aquatic ecosystems; f) buildings; g) soil; h) terrestrial ecosystems; 5. material abatement of hazardous substances, mixtures or products, such as asbestos or lead-based paint; 6. other specialised pollution-control activities; 7. clean-up after disasters from natural hazards, such as flooding, or earthquake; 8. remediation of disused mining sites or legacies not associated with extraction revenues; 9. containment operations, hydraulic barriers, active and passive barriers intended to limit or prevent migration of pollutants. The activity also includes all activities that are required to prepare, plan, monitor and follow-up the decontamination or remediation activity itself, such as: 1. preparatory investigations, including data collection and surveying activities (in particular geological or hydrological), technical feasibility and environmental impact studies required to define the remediation project; 2. monitoring and control of the remediation measures, including: a) sampling of soil, water, sediment, biota or other materials; b) laboratory analysis of samples to identify the nature and concentration of pollutants;

	c) installation, operation and maintenance of monitoring facilities and equipment such as observation wells in and outside the perimeter of the remediation site; 3. demolition of contaminated buildings or other structures, dismantling large-scale machinery and equipment (i.e., decommissioning) and removal of surface sealing and concreting; 4. earth moving or dredging, including excavation, landfilling, levelling, construction or reinforcement of perimeter walls or fences, primary access and internal roads and any other activities necessary to operate the decontamination; 5. implementation of other environmental protection and pollution prevention and control measures to comply with the conditions imposed in the environmental permit for the remediation project, including measures for safeguarding safety of operations on-site and health of workers (such as for fire control, flood protection, hazardous waste management), protection of workers, site access control, management of invasive species before or during decontamination or remediation, reinforcement operations carried out prior to or during decontamination. This economic activity does not include: 1. pest control in agriculture; 2. purification of water for water supply purposes; 3. decontamination or remediation of nuclear plants and sites; 4. treatment and disposal of hazardous or non-hazardous waste unrelated to the site contamination problem; 5. morphological remediation; 6. remediation of legally non-conforming landfills and abandoned or illegal waste dumps unrelated to the site under remediation; 7. emergency services; 8. outdoor sweeping and watering of streets. This activity covers the case where the polluter cannot be identified or is financially incapable of undertaking the remediation, third-party remediation will be considered. This activity is eligible for green finance mechanism, aiming to incentivize and support environmental restoration efforts.
Objective	EO5: Pollution Prevention and Control

Tiers	EO1: Climate Change Mitigation	Reference with international best practice/reference taxonomies
Green	No TSC available	Not applicable

Tiers	EO2: Climate Change Adaptation	Reference with international best practice/reference taxonomies
Green	No TSC available	See notes at the start of this section (TSC for waste management activities)

Tiers	EO3: Sustainable Use and Protection of Marine and Water Resources	Reference with international best practice/reference taxonomies
Green	No TSC available	Not applicable

Tiers	EO4: Resource Resilience and Transition to a Circular Economy	Reference with international best practice/reference taxonomies
Green	No TSC available	Not applicable

Tiers	EO5: Pollution Prevention and Control	Reference with international best practice/reference taxonomies
Green	1. Remediation activities are not carried out by the operator that caused the pollution or a person acting on behalf of that operator, in order to comply with the requirements of 'polluter-pays' principle according to national law; AND	Aligned to EU Taxonomy criteria, except 5 which is Thailand specific.

	2. Contaminant removal or control meets national regulatory standards, or a site-specific risk assessment when national standards are not available, considering contaminant properties and spread, to eliminate significant health and environmental risks to ensure that the contaminated area is safe for current or future use; AND 3. The remediation activity is conducted in line with best industry practice and includes all the following elements: a. the original source of contamination has been stopped or addressed so as to prevent further contamination before any assessment or remediation activity is undertaken; AND b. preparatory investigations including site-specific surveys are carried out in line with best industry practice to establish the following elements used to define the environmental targets for the remediation and evaluate the remedial options: i. the location, characteristics and extent of the contaminated site; AND ii. the underlying geological and hydrological conditions; AND iii. the likely quantity, composition and sources of contamination; AND iv. soil and water pollution originating from it as well as the risks to human health and the environment; AND c. the remedial options are analysed in line with best industry practice and the most suitable remedial measures are defined in a remediation and monitoring plan; AND d. any hazardous or non-hazardous waste or contaminated soils extracted or otherwise produced by the remediation activity is subject to appropriate	

	collection, transport, treatment, recovery or disposal by an authorized operator, in accordance with legal requirements and care is taken to prevent any mixing of excavated contaminated soils and non-contaminated soils; AND e. remediation methods do not include reducing pollutant concentrations through dilution or watering down, unless a full justification, for reason other than cost considerations, is provided in the remediation plan; AND f. control and monitoring plan is implemented for at least 10 years, unless a different duration sufficient to guarantee long-term risk control is defined in the national law or in the remediation and monitoring plan; AND 4. The remediation project, including monitoring and control plan is approved by the competent authority in accordance with national legal requirements, ensuring that conflicts with local communities have been resolved, if any, through a structured process; AND 5. Surveillance of the control and monitoring plan takes place at least on an annual basis to ensure the plan's efficiency and relevance.	
Amber	No TSC available	
Red	Does not meet Green or Amber criteria	
Applicable standards/ Best Practice Examples	1. Guidelines for the Management of Areas Contaminated with Hazardous Substances – Pollution Control Department (pcd.go.th) (Link) 2. Guidelines for Risk Assessment of Soil or Groundwater Pollution – Pollution Control Department (pcd.go.th) (Link) 3. Guidelines for the Restoration of Environment and Natural Resources Damaged by Contamination of Soil or Groundwater Pollution PCD 08-044 (Link)	

	4. UNEP Guidance on the management of contaminated sites (Link)	

Tiers	EO6: Protection and Restoration of Biodiversity and Ecosystem	Reference with international best practice/reference taxonomies
Green	No TSC available	Not applicable

8. Remediation of legally non-conforming landfills and abandoned or illegal waste dumps

Sector	Waste Management
Activity	Remediation of legally non-conforming landfills and abandoned or illegal waste dumps
ISIC Code	390, 382, 383
Description	Remediation of legally non-conforming landfills and of abandoned or illegal waste dumps that have been closed and are not taking in further waste other than possibly inert or biostabilised waste to be used as landfill cover material (as far as allowed in the environmental permit for the remediation project). The activity may include any of the following remediation strategies and sub-activities typically implemented as part of projects aimed at removing, controlling, containing or diminishing polluting emissions from non-conforming landfills and abandoned or illegal dumpsites: 1. remediation through environmental isolation of non-conforming or illegal landfills or dumpsites at the present site, including: a. physical isolation, concentration, structural stabilisation and protection of the non-conforming or illegal landfill or dumpsite, including application of hydraulic barriers, sealing, drainage and cover layers; b. installation, operation and maintenance of drainage and separate collection and treatment systems for leachates and run-off water prior to discharge; c. installation, operation and maintenance of landfill gas collection, abatement and control systems, including wells, piping and flaring systems; d. application of topsoil and vegetation cover for renaturation purposes;

	2. remediation through excavation and removal of non-conforming or illegal landfills or dumpsites with subsequent treatment, recovery or disposal of excavated waste, including: a. selective excavation of the waste deposited on the site, loading and transport to existing permitted treatment, recovery or disposal facilities with separate management of non-hazardous and hazardous waste; b. sorting and recovery of materials and fuels from excavated non-hazardous waste, including the installation, operation and maintenance of dedicated facilities and equipment for the duration of the remediation project; 3. remediation through decontamination of soils, surface and groundwater at the place of pollution, including the following: a. selective excavation, loading, transport, temporary storage, backfilling of soil, with separate management of non-contaminated and contaminated soils; b. treatment of contaminated soil or water, either in situ or ex situ, using in particular physical, chemical or biological methods, including the installation, operation and maintenance of dedicated facilities for the duration of the remediation project; c. application of hydraulic barriers, active and passive barriers intended to limit/prevent migration of pollutants. The activity also includes all of the following sub-activities that are required to prepare, plan, monitor and follow-up on the above remediation measures 1. preparatory investigations, including data collection and surveying activities (in particular geological or hydrological), technical feasibility and environmental impact studies required to define the remediation project; 2. site preparation, including earth moving and levelling works, construction or reinforcement of perimeter walls or fences, primary access and internal roads, demolition of buildings or other structures on the landfill site; 3. monitoring and control of the remediation measures, including: a) sampling of soil, water, sediment, biota or other materials; b) laboratory analysis of samples to identify the nature and concentration of pollutants;

	c) installation, operation and maintenance of monitoring facilities and equipment such as observation wells in and outside the perimeter of the landfill site; 4. implementation of other environmental protection and pollution prevention and control measures to comply with the conditions imposed in the environmental permit for the remediation project, including measures for safeguarding safety of operations on-site and health of workers, such as for fire control, flood protection, hazardous waste management. The activity does not include: 1. the permanent closure, rehabilitation and after care of existing or new landfills that comply with the law of Thailand, 2. landfill gas transformation for utilisation as energy carrier or industry feedstock; 3. redevelopment of the remediated site for other economic use such as recreational, residential or commercial areas, installation of photovoltaic (PV) panels; 4. compensatory measures for pollution caused by the landfill or dumpsite such as the development and operation of alternative water supply systems for affected populations living in the surrounding area. This activity covers the case where the polluter cannot be identified or is financially incapable of undertaking the remediation. In this cases, third-party remediation will be considered. This activity is eligible for green finance mechanism, aiming to incentivize and support environmental restoration efforts.
Objective	EO5: Pollution Prevention and Control

Tiers	**EO1: Climate Change Mitigation**	**Reference with international best practice/reference taxonomies**
Green	No TSC available	Not applicable

Tiers	EO2: Climate Change Adaptation	Reference with international best practice/reference taxonomies
Green	No TSC available	See notes at the start of this section (TSC for waste management activities)

Tiers	EO3: Sustainable Use and Protection of Marine and Water Resources	Reference with international best practice/reference taxonomies
Green	No TSC available	Not applicable

Tiers	EO4: Resource Resilience and Transition to a Circular Economy	Reference with international best practice/reference taxonomies
Green	No TSC available	Not applicable

Tiers	EO5: Pollution Prevention and Control	Reference with international best practice/reference taxonomies
Green	1. Remediation activities are not carried out by the operator that caused the pollution or a person acting on behalf of that operator in order to comply with the requirements of 'polluter-pays' principle according to national law; AND 2. Contaminant removal or control meets national regulatory standards, or a site-specific risk assessment when national standards are not available, considering contaminant properties and spread, to eliminate significant health and environmental risks to ensure that the contaminated area is safe for current or future use; AND	Aligned to EU Taxonomy criteria except for monitoring plan duration (criterion 3h).

	3. The remediation activity is conducted in line with best industry practice and includes all of the following elements: a. the non-conforming or illegal landfill or dumpsite to be remediated has been closed and is not taking in further waste other than possibly inert or biostabilised waste to be used as landfill cover material (as far as allowed in the environmental permit for the remediation project); AND b. preparatory investigations including site-specific surveys are carried out in line with best industry practice to establish the following elements used to define the environmental targets for the remediation and evaluate the remedial options: i. the location, characteristics and extent of the landfill and the polluted area; AND ii. the underlying geological and hydrological conditions; AND iii. the likely quantity, composition and sources of landfilled waste; AND iv. soil and water pollution originating from it as well as the risks to human health and the environment; AND c. the results of such remedial investigations are inputs for a feasibility study that defines the objectives, targets and scope for the remediation and evaluates alternative remedial options; AND d. the remedial options are analysed in line with best industry practice, and/or accepted international standards, and described in a feasibility study produced for the landfill remediation project that convincingly demonstrates how the selected remedial option is the overall best solution to meet the defined remediation objectives and targets;	

	AND e. all materials and fuels recovered from landfilled waste meet relevant quality standards or user specifications for the intended recovery operations and do not represent a risk for the environment or human health; AND f. any hazardous or non-hazardous waste extracted or otherwise produced by the remediation activity is subject to appropriate collection, transport, treatment, recovery or disposal by an authorised operator, in accordance with legal requirements; AND g. remediation methods do not include reducing pollutant concentrations through dilution or watering down, unless a full justification, for reason other than cost considerations, is provided in the remediation plan; AND h. control and monitoring plan is implemented for at least 10 years unless a different duration sufficient to guarantee long-term risk control is defined in national legislation or by the competent regulatory authority for the specific remediation project; AND 4. The remediation project, including monitoring and control plan is approved by the competent authority in accordance with national legal requirements ensuring that conflicts with local communities have been resolved, if any, through a structured process; AND 5. Surveillance of the control and monitoring plan takes place at least on an annual basis to ensure the plan's efficiency and relevance.	
Amber	No TSC available	Not applicable.
Red	Does not meet Green or Amber criteria	

Applicable standards/ Best Practice Examples	1. Guidelines for the Management of Areas Contaminated with Hazardous Substances – Pollution Control Department (pcd.go.th) (Link) 2. Guidelines for Risk Assessment of Soil or Groundwater Pollution – Pollution Control Department (pcd.go.th) (Link) 3. Guidelines for the Restoration of Environment and Natural Resources Damaged by Contamination of Soil or Groundwater Pollution PCD 08-044 (Link) 4. UNEP Guidance on the management of contaminated sites (Link)	

Tiers	EO6: Protection and Restoration of Biodiversity and Ecosystem	Reference with international best practice/reference taxonomies
Green	No TSC available	Not applicable

9. Sorting and material recovery from non-hazardous waste

Sector	Waste Management
Activity	Sorting and material recovery from non-hazardous waste
ISIC Code	3830
Description	Construction, upgrade, and operation of facilities for the sorting and/or recovery of separately collected non-hazardous waste streams into usable secondary raw materials, thus displacing the use of primary raw materials in production processes. This activity includes all types of Material Recovery Facility (MRF) from manual MRF (waste buy-back centre or informal MRF), semi-automated MRF and automated MRF (formal MRF). The non-hazardous waste feedstock may originate from any MSW, from dismantling and depollution activities, from construction and demolition activity, or from sorting of mixed waste intended for recycling. All facilities and equipment such as conveyor belts, compactors, pelletisers, air classifiers, magnetic belts, and other infrastructure required for material sorting and/or recovery are eligible. This activity does not include WEEE dismantling.
Objective	EO4: Resource Resilience and Transition to a Circular Economy

Tiers	EO1: Climate Change Mitigation	Reference with international best practice/reference taxonomies
Green	No TSC available	Thailand and EU Taxonomies set criteria at EO4, and not EO1 for this activity. SG Taxonomy sets criteria at EO1. See EO4 for comparison.

Tiers	EO2: Climate Change Adaptation	Reference with international best practice/reference taxonomies
Green	No TSC available	See notes at the start of this section (TSC for waste management activities)

Tiers	EO3: Sustainable Use and Protection of Marine and Water Resources	Reference with international best practice/reference taxonomies
Green	No TSC available	Not applicable

Tiers	EO4: Resource Resilience and Transition to a Circular Economy	Reference with international best practice/reference taxonomies
Green	1. The activity converts at least 40%[10] by weight of all non-hazardous waste received by the facility into secondary raw materials (for example pet bales, paper bales and fertiliser) which are suitable for the substitution of primary raw materials; AND 2. The facility recovering non-hazardous waste has implemented best industry practice on improving overall environmental performance of the plant including: a. a waste characterisation procedure and a waste acceptance procedure regarding the quality of incoming waste; AND b. a tracking system and inventory aiming to track the location and quantity of waste in the plant; AND c. an output quality management system to ensure that the output of the waste treatment is in line with applicable quality requirements or standards; AND d. the relevant waste segregation measures or procedures to ensure that waste, after separation, is kept separated depending on its properties in order to enable easier and environmentally safer storage and treatment;	Aligned to SG and EU Taxonomy criteria except for 40% recovery rate (criterion 1). The reason is that significant volumes of high-value recyclables are collected by the waste buy-back centre before entering the formal MRF.

[10] **Rationale for threshold setting:** according to 2023 Thailand Pollution Outlook Report – Pollution Control Department (pcd.go.th) and 2022 Thailand Pollution Outlook Report - – Pollution Control Department (pcd.go.th), approximate 34% of MSW is sorted and utilised. To align with EU and Singapore Taxonomies which require a minimum 50% recycling rate, Thailand Taxonomy sets out a 40% recycling rate for Green and 30% for Amber criteria. This approach aims to improve current practices without distinguishing between waste buy-back centre and formal MRF. Although lower than international targets, these figures are considered more feasible for Thailand's context, promoting better waste management practices across the country.

	AND e. implemented measures to prevent and control potential environmental pollutions are made publicly available; AND f. [Semi-automated or Automated MRF] the facility has installed the sorting and material recovery technology and processes to meet relevant technical specifications or quality standards. The activity uses state-of-the-art technologies suited to the waste fractions processed including optical separation by near-infrared spectroscopy or X-ray systems, density separation, magnetic separation or size separation.	
Amber	**1.** The activity converts at least 30% by weight of all non-hazardous waste received by the facility into secondary raw materials (for example pet bales, paper bales, and fertiliser) which are suitable for the substitution of primary raw materials; AND **2.** Implemented measures to prevent and control potential environmental pollution are implemented and made publicly available; AND **3.** The sunset date for an activity classified under the Amber criteria is 31 December 2029 after which the facilities must meet the Green Criteria	Aligned to SG Taxonomy criteria except for 30% recovery rate (criterion 1).
Red	Does not meet Green or Amber criteria	
Applicable Standards/ Best Practice Examples	1. UNEP Topic Sheet – Extended Producer Responsibility (Link) 2. Voluntary EPR initiatives in Thailand include Thailand Institute of Packaging and Recycling Management for Sustainable Environment (TIPMSE) and Packaging Recovery Organization Thailand Network	

Tiers	EO5: Pollution Prevention and Control	Reference with international best practice/reference taxonomies
Green	No TSC available	Not applicable

Tiers	EO6: Protection and Restoration of Biodiversity and Ecosystem	Reference with international best practice/reference taxonomies
Green	No TSC available	Not applicable

10. Treatment of hazardous waste

Sector	Waste Management
Activity	Treatment of hazardous waste
ISIC Code	3822
Description	Construction, repurposing, upgrade, and operation of dedicated facilities for the treatment of hazardous waste, including the incineration of non-recyclable hazardous waste, biological treatment of hazardous waste and physico-chemical treatment. The activity does not include: 1. disposal operations of hazardous waste such as landfilling or permanent storage. 2. incineration of recyclable hazardous waste and incineration of non-hazardous waste; 3. treatment and disposal of toxic live or dead animals and other contaminated waste; 4. treatment and disposal of radioactive nuclear waste. <u>Note:</u> 1) Co-processing activity does not belong to Treatment of hazardous activity. Please refer to Cement-manufacturing Activity in Manufacturing sector. 2) Recovery of batteries does not belong to Treatment of hazardous waste activity. Please refer to Recovery of Batteries Activity in Manufacturing sector.
Objective	- EO4: Resource Resilience and Transition to a Circular Economy - EO5: Pollution Prevention and Control

Tiers	EO1: Climate Change Mitigation	Reference with international best practice/reference taxonomies
Green	No TSC available	Not applicable

Tiers	EO2: Climate Change Adaptation	Reference with international best practice/reference taxonomies
Green	No TSC available	See notes at the start of this section (TSC for waste management activities)
Tiers	EO3: Sustainable Use and Protection of Marine and Water Resources	Reference with international best practice/reference taxonomies
Green	No TSC available	Not applicable

Tiers	EO4: Resource Resilience and Transition to a Circular Economy	Reference with international best practice/reference taxonomies
Green	1. The activities consist of the material recovery of secondary raw materials (including chemical substances) from source segregated hazardous waste; AND 2. The recovered materials are substituting primary raw materials, or chemicals in production processes; AND 3. The recovered materials comply with the applicable industry specifications, harmonised standards, as well as relevant applicable national legislation.	Aligned to EU Taxonomy criteria.
Amber	No TSC available.	Not applicable
Red	Does not meet Green or Amber criteria	

Tiers	EO5: Pollution Prevention and Control	Reference with international best practice/reference taxonomies
Green	1. For all waste treatment processes, the activity complies with the national regulations, international conventions, and requirements set out either in the industry best practice for waste treatment or for waste incineration; AND a) During the pre-acceptance procedures, at least the following information is gathered: i. expected date of arrival at the waste treatment plant; AND ii. contact details of the waste producer, the sector which the waste originates from and the nature of process producing the waste, including the variability of the process; AND iii. the estimated quantity expected to be delivered to the operator per delivery and per year; AND iv. description of the waste, including composition, hazardous properties of the waste, waste code and the suitable treatment route; AND b) During the acceptance procedures, the following elements are in place: i. a reception facility equipped with a laboratory to analyse samples on site and documented analytical standard operating procedures, with the option to sub-contract analyses to accredited external contract laboratories; AND ii. documented sampling procedure consistent with and relevant standards; AND	Aligned to EU Taxonomy criteria.

	iii. documented analysis of the relevant physico-chemical parameters for the treatment; AND iv. a dedicated quarantine waste storage area, as well as written procedures to manage non-accepted waste; AND 2. Prior to final disposal, hazardous waste is treated to the level specified by national law and in alignment with international best practice; AND 3. For final disposal, hazardous waste is treated in accordance with national law and in alignment with international best practice. When secured landfill is identified as the disposal method, ensure that leachate qualifications comply with the thresholds set out in applicable regulations.	
Amber	No TSC available	Not applicable
Red	Does not meet Green or Amber criteria	

Tiers	**EO6: Protection and Restoration of Biodiversity and Ecosystem**	**Reference with international best practice/reference taxonomies**
Green	No TSC available	Not applicable

11. Construction, extension, upgrade, operation and renewal of decentralised wastewater collection and treatment

Sector	Waste Management
Activity	Construction, extension, upgrade, operation and renewal of decentralised wastewater collection and treatment
ISIC Code	3700
Description	Construction, extension, upgrade, operation and renewal of decentralised wastewater infrastructure including treatment plants, sewer networks, connections to the wastewater infrastructure, decentralised wastewater treatment facilities, including individual and other appropriate systems, and discharge structures for treated

	effluent. The activity may include innovative and advanced treatments, including the removal of micropollutants. Decentralised treatment plants consist of on-site and cluster wastewater treatment plants. Sources of wastewater include human, industrial, and agricultural wastewater. <u>Note:</u> For EO1 contribution of Anaerobic digestion of wastewater, refer to the activity 1. Anaerobic digestion of bio-waste or wastewater.
Objective	- EO2: Climate Change Adaptation - EO3: Sustainable Use and Protection of Marine and Water Resources - EO4: Resource Resilience and Transition to a Circular Economy

Tiers	**EO1: Climate Change Mitigation**	**Reference with international best practice/reference taxonomies**
Green	No TSC available	Not applicable

Tiers	**EO2: Climate Change Adaptation**	**Reference with international best practice/reference taxonomies**
Green	1. The economic activity has implemented physical and nonphysical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that activity; AND 2. The physical climate risks that are material to the activity have been identified by performing a robust climate risk and vulnerability assessment (CRVA); AND 3. The climate projections and assessment of impacts are based on best practice and available guidance and take into account the state-of-the-art science for vulnerability and risk analysis and related methodologies in line with the most recent Intergovernmental Panel on Climate	Criteria are aligned with generic EO2 criteria for ASEAN Taxonomy (AT) V3. Note that the AT does not define criteria for this specific activity.

	Change reports, scientific peer-reviewed publications and open source or paying models; AND 4. The adaptation solutions implemented: a. do not adversely affect the adaptation efforts or the level of resilience to physical climate risks of other people, of nature, of cultural heritage, of assets and of other economic activities; AND b. favour nature-based solutions or rely on blue or green infrastructure to the extent possible; AND c. are consistent with local, sectoral, regional or national adaptation plans and strategies; AND d. are monitored and measured against pre-defined indicators and remedial action is considered where those indicators are not met; AND e. where the solution implemented is physical and consists in an activity for which technical screening criteria have been specified, the solution complies with the do no significant harm technical screening criteria for that activity.	
Amber	No TSC available	Not applicable.
Red	Does not meet Green or Amber criteria	

Tiers	**EO3: Sustainable Use and Protection of Marine and Water Resources**	**Reference with international best practice/reference taxonomies**
Green	1. The wastewater treatment system fulfils the discharge requirements and size-specific requirements, contributes to the achievement of good status of the water bodies, in accordance with applicable national law or international standards which pursue objectives of good water status and good ecological potential;	Aligned to EU Taxonomy criteria.

	AND 2. The river basin or water use and protection management plan contains at least the information related to the status of water bodies, the activities potentially impacting the status, and the measures taken to avoid or minimize such impacts.; AND 3. Where the wastewater treatment plant has a capacity of 100,000 population equivalent (20,000 m^3/day[11]) or more, or of a daily inflow of a five-day biochemical oxygen demand (BOD5) load of more than 6,000 kg, it uses a sludge treatment such as anaerobic digestion or a technology with the same or a lower net energy demand (considering both energy generation and consumption), to stabilise the sludge.	
Amber	1. The wastewater treatment system fulfils the discharge requirements and size-specific requirements, contributes to the achievement of good status of the water bodies, in accordance with applicable national law or international standards which pursue objectives of good water status and good ecological potential; AND 2. The river basin or water use and protection management plan contains at least the information related to the status of water bodies, the activities potentially impacting the status, and the measures taken to avoid or minimize such impacts.; AND 3. Sludge is treated according to national requirements.	Not applicable.
Red	Does not meet Green or Amber criteria	

[11] The conversion from p.e. to m3/day was done based on the estimated average discharge of 200 litre per population per day based on the figure stated in Urban Wastewater Treatment Manual – Pollution Control Department (pcd.go.th) (link)

Tiers	EO4: Resource Resilience and Transition to a Circular Economy	Reference with international best practice/reference taxonomies
Green	For facilities for collection and treatment of wastewater for the production of water, the activity complies with the following criteria: 1. Water is for purposes other than human consumption; 2. Water is suitable for reuse after proper treatment depending on the level of contamination and subsequent reuse purposes in accordance with national regulations.	Aligned to EU Taxonomy – Production of alternative water resources but the scope is limited to wastewater treatment.
Amber	No TSC available	Not applicable
Red	Does not meet Green or Amber criteria	

Tiers	EO5: Pollution Prevention and Control	Reference with international best practice/reference taxonomies
Green	No TSC available	Not applicable

Tiers	EO6: Protection and Restoration of Biodiversity and Ecosystem	Reference with international best practice/reference taxonomies
Green	No TSC available	Not applicable

12. Construction, extension, upgrade, and operation of centralised wastewater collection and treatment

Sector	Waste Management
Activity	Construction, extension, upgrade, and operation of centralised wastewater collection and treatment
ISIC Code	3700
Description	Construction, extension, upgrade, and operation of centralised wastewater systems including collection (sewer network) and treatment
Objective	- EO1: Climate Change Mitigation

	- EO2: Climate Change Adaptation

Tiers	EO1: Climate Change Mitigation	Reference with international best practice/reference taxonomies
Green	1. The net energy consumption of the wastewater treatment plant equals to or is lower than: a. 0.48 kWh/m^3 (35 kWh per population equivalent per annum) for treatment plant capacity below 2,000 m^3/day (10,000 p.e)[11]; OR b. 0.34 kWh/m^3 (25 kWh per population equivalent per annum) for treatment plant capacity between 2,000 – 20,000 m^3/day (10,000 and 100,000 p.e.) [11]; OR c. 0.27 kWh/m^3 (20 kWh per population equivalent per annum) for treatment plant capacity above 20,000 m^3/day (100,000 p.e) [11]; AND 2. Net energy consumption of the operation of the wastewater treatment plant may take into account measures decreasing energy consumption relating to source control (reduction of storm water or pollutant load inputs), and, as appropriate, energy generation within the system (such as hydraulic, solar, thermal and wind energy); AND 3. For the construction and extension of a wastewater treatment plant or a wastewater treatment plant with a collection system, which are substituting more GHG-intensive treatment systems, an assessment of the direct GHG emissions is performed for example IPCC Guidelines. The results are disclosed to investors and clients on demand;	Aligned to EU and SG Taxonomy criteria.
Amber	1. The net energy consumption of the wastewater treatment plant equals to or is lower than 0.93 kWh/m^3 (68 kWh per population equivalent per annum)[11] and is applicable for	Aligned to SG Taxonomy criteria.

	all treatment plant capacities. Net energy consumption of the operation of the wastewater treatment plant may take into account measures decreasing energy consumption relating to source control (reduction of storm water or pollutant load inputs), and as appropriate, renewable energy generation; AND 2. The sunset is 31 December 2035, beyond which the plants must meet the Green Criteria.	
Red	Does not meet Green or Amber criteria	

Tiers	**EO2: Climate Change Adaptation**	**Reference with international best practice/reference taxonomies**
Green	1. The economic activity has implemented physical and nonphysical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that activity; AND 2. The physical climate risks that are material to the activity have been identified by performing a robust climate risk and vulnerability assessment (CRVA); AND 3. The climate projections and assessment of impacts are based on best practice and available guidance and take into account the state-of-the-art science for vulnerability and risk analysis and related methodologies in line with the most recent Intergovernmental Panel on Climate Change reports, scientific peer-reviewed publications and open source or paying models; AND 4. The adaptation solutions implemented: a) do not adversely affect the adaptation efforts or the level of resilience to physical climate risks of other people, of nature, of cultural heritage, of assets and of other economic activities;	Criteria are aligned with generic EO2 criteria for ASEAN Taxonomy (AT) V3. Note that the AT does not define criteria for this specific activity.

	AND b) favour nature-based solutions or rely on blue or green infrastructure to the extent possible; AND c) are consistent with local, sectoral, regional or national adaptation plans and strategies; AND d) are monitored and measured against pre-defined indicators and remedial action is considered where those indicators are not met; AND e) where the solution implemented is physical and consists in an activity for which technical screening criteria have been specified, the solution complies with the do no significant harm technical screening criteria for that activity.	
Amber	No TSC available	Not applicable.
Red	Does not meet Green or Amber criteria	

Tiers	**EO3: Sustainable Use and Protection of Marine and Water Resources**	**Reference with international best practice/reference taxonomies**
Green	No TSC available	Not applicable

Tiers	**EO4: Resource Resilience and Transition to a Circular Economy**	**Reference with international best practice/reference taxonomies**
Green	No TSC available	Not applicable

Tiers	**EO5: Pollution Prevention and Control**	**Reference with international best practice/reference taxonomies**
Green	No TSC available	Not applicable

Tiers	EO6: Protection and Restoration of Biodiversity and Ecosystem	Reference with international best practice/reference taxonomies
Green	No TSC available	Not applicable

13. Renewal of centralised wastewater collection and treatment

Sector	Waste Management
Activity	Renewal of centralised wastewater collection and treatment
ISIC Code	3700
Description	Renewal of centralised wastewater systems including collection (sewer network) and treatment. It implies no material change related to the load or volume of flow collected or treated in the wastewater system
Objective	- EO1: Climate Change Mitigation - EO2: Climate Change Adaptation

Tiers	EO1: Climate Change Mitigation	Reference with international best practice/reference taxonomies
Green	1. The renewal of a collection system improves energy efficiency by decreasing the average energy consumption by 20% compared to own baseline performance averaged over three years, demonstrated on an annual basis. That decrease of energy consumption can be accounted for at the level of the project (i.e., the collection system renewal) or, across the downstream wastewater agglomeration (i.e., including the downstream collection system, treatment plant or discharge of wastewater); AND/OR 2. The renewal of a wastewater treatment plant improves energy efficiency by decreasing the average energy consumption of the system by at least 20% compared to own baseline performance averaged over three years, demonstrated on an annual basis; AND	Aligned to EU Taxonomy criteria.

	3. The net energy consumption is calculated or estimated in terms of kWh/p.e. per annum of the wastewater collected or effluent treated[12]; AND 4. The operator demonstrates that there are no material changes relating to external conditions, including modifications to discharge authorisation(s) or changes in load to the agglomeration that would lead to a reduction of energy consumption, independent of efficiency measures taken.	
Amber	1. The renewal of a collection system improves energy efficiency by decreasing the average energy consumption by 10% compared to own baseline performance averaged over three years, demonstrated on an annual basis. That decrease of energy consumption can be accounted for at the level of the project (i.e., the collection system renewal) or, across the downstream wastewater agglomeration (i.e., including the downstream collection system, treatment plant or discharge of wastewater); AND/OR 2. The renewal of a wastewater treatment plant improves energy efficiency by decreasing the average energy consumption of the system by at least 10% compared to own baseline performance averaged over three years, demonstrated on an annual basis; AND 3. The net energy consumption of the system is calculated or estimated in terms of kWh/p.e. per annum; AND 4. The operator demonstrates that there are no material changes relating to external conditions, including modifications to discharge authorisation(s) or changes in load to the agglomeration that would lead to a reduction	Thailand specific

[12] Calculation of net energy consumption takes into account measures decreasing energy consumption relating to source control (reduction of storm water or pollutant load inputs) and, as appropriate, energy generation within the system (such as hydraulic, solar, thermal and wind energy)

	of energy consumption, independent of efficiency measures taken.	
Red	Does not meet Green or Amber criteria	

Tiers	EO2: Climate Change Adaptation	Reference with international best practice/reference taxonomies
Green	1. The economic activity has implemented physical and nonphysical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that activity; AND 2. The physical climate risks that are material to the activity have been identified by performing a robust climate risk and vulnerability assessment (CRVA); AND 3. The climate projections and assessment of impacts are based on best practice and available guidance and take into account the state-of-the-art science for vulnerability and risk analysis and related methodologies in line with the most recent Intergovernmental Panel on Climate Change reports, scientific peer-reviewed publications and open source or paying models; AND 4. The adaptation solutions implemented: a) do not adversely affect the adaptation efforts or the level of resilience to physical climate risks of other people, of nature, of cultural heritage, of assets and of other economic activities; AND b) favour nature-based solutions or rely on blue or green infrastructure to the extent possible; AND c) are consistent with local, sectoral, regional or national adaptation plans and strategies; AND	Criteria are aligned with generic EO2 criteria for ASEAN Taxonomy (AT) V3. Note that the AT does not define criteria for this specific activity.

	d) are monitored and measured against pre-defined indicators and remedial action is considered where those indicators are not met; AND e) where the solution implemented is physical and consists in an activity for which technical screening criteria have been specified, the solution complies with the do no significant harm technical screening criteria for that activity.	
Amber	No TSC available	Thailand specific
Red	Does not meet Green or Amber criteria	

Tiers	**EO3: Sustainable Use and Protection of Marine and Water Resources**	**Reference with international best practice/reference taxonomies**
Green	No TSC available	Not applicable

Tiers	**EO4: Resource Resilience and Transition to a Circular Economy**	**Reference with international best practice/reference taxonomies**
Green	No TSC available	Not applicable

Tiers	**EO5: Pollution Prevention and Control**	**Reference with international best practice/reference taxonomies**
Green	No TSC available	Not applicable

Tiers	**EO6: Protection and Restoration of Biodiversity and Ecosystem**	**Reference with international best practice/reference taxonomies**
Green	No TSC available	Not applicable

Annex I Example of Compliance Record

The following documents may be requested as evidence of compliance.

1. Environmental Permits and Licenses

Copies of all relevant environmental permits and licenses including (but not limited to):

- Factory operation permit issued by DIW for Type 3 factories
- Fertiliser or Soil improver registration certificate from Department of Agriculture if the fertiliser or soil improver is for commercialization purpose
- Proof of annual vehicle inspection as evidence on compliance of national emission regulations
- Valid operating permits for waste collection and transport.

2. Standard Operating Procedures (SOPs)

Documentation of all relevant SOPs for all aspects of the activity including (but not limited to):

- Waste acceptance, segregation, tracking procedure
- Rejects handling procedure
- Leachate leakage prevention and control procedure
- Biogas utilization procedure
- Digestate or Compost utilization procedure ensuring material recovery is prioritised
- Methane leakage prevention procedure
- Safe handling, transport, and storage of WEEE procedure

3. Records or Documentation

Records or documentation to evidence the performance of SOPs implemented including (but not limited to):

- Records of employee training on relevant environmental regulations, safety procedures, and best practices.

- Records of quantity of waste collected, destinations of waste according to waste stream
- Updated photos of waste transport, storage and collection facilities
- [for WtE or waste treatment facilities] Report on the type and quantity of pollutants discharged from industrial factories (Ror Wor1-3)
- [for EO2 Climate Change Adaptation] Climate Risk and Vulnerability Assessment (CRVA)
- [for wastewater treatment activities] Water or River basin management plan for wastewater related activities
- [for wastewater treatment activities] Operational logs showing daily or hourly wastewater flow rates, records of influent and effluent water quality parameters
- [for wastewater treatment activities] Detailed energy consumption breakdown showing the consumption of individual units within the wastewater treatment plant. Documentation of energy generation within the system. GHG Emissions Assessment Report.

4. Audits and Inspections

Records of internal and/or external audits and inspections conducted at the facility including (but not limited to):

- ISO 14001:2015 – Environmental management systems
- [for wastewater treatment activities] Third-party Inspection result of discharge water quality

Annex II Applicable laws

This table provides a list of regulations that may not directly contribute to the achievement of green TSC but are fundamental to the implementation of the activity.

Activity	Applicable Laws
1. Anaerobic digestion of bio-waste or wastewater	1. The Enhancement and Conservation of National Environment Quality Act, B.E.2535 (1992) and (No. 2) B.E. 2561 (2018) 1.1. Notification of the Ministry of Natural Resources and Environment on Establishment of controlling standards for wastewater from industrial factories, industrial estates and industrial zones, B.E. 2559 (2016). 1.2. Notification of the Ministry of Natural Resources and Environment Prescribing Standards for Controlling Air Emissions from factory 1.3. Notification of the Ministry of Natural Resources and Environment on Prescribing of Factory Types and Sizes, Procedure for the Control of Discharges of Waste Water that Cause Adverse Effects on the Public Water Bodies and Environment 1.4. Notification of the Ministry of Natural Resources and Environment on Prescribing Standards for Controlling Odor Intensity Emission from Pollution Sources 1.5. Notification of Pollution Control Department on Guidelines for Considering the Suitability of Areas for Designing, Constructing, and Managing Sanitary Landfill Facility B.E. 2560 (2017) 2. Public Health Act, B.E. 2535 (1992) 2.1. Ministerial Regulation of Public Health on the Management of Toxic or Hazardous Waste from Communities, B.E. 2563 (2020) 2.2. Ministerial Regulation of Public Health on the Joint management of Infectious Waste between Local

Activity	Applicable Laws
	Government Authorities and other Local Government Agencies or State Agencies, B.E. 2564 (2021) 2.3. Ministerial Regulation of Public Health on the Disposal of Infectious Waste (No. 2), B.E. 2564 (2021) 2.4. Ministerial Regulation of Public Health on Sanitary Standards for General Waste Management, B.E. 2560 (2017) 2.5. Notification of the Ministry of Public Health on Control Measures for the Transport of Infectious Waste to Prevent Illegal Dumping, B.E. 2565 (2022) 2.6. Notification of the Ministry of Public Health on Criteria for Selecting Sanitary Landfill Facilities, B.E. 2560 (2017) 2.7. Notification of the Ministry of Public Health on Characteristics and Conditions for Preventing Groundwater Contamination from Leachate, B.E. 2560 (2017) 2.8. Notification of the Ministry of Public Health on Businesses Hazardous to Health, B.E. 2558 (A.D. 2015) 3. Fertiliser Act, B.E. 2518 (1975) and its Amendments 3.1. Ministerial Regulation on Fees for Fertiliser-related Business Operations, B.E. 2554 (2011) 3.2. Notification of Ministry of Agriculture and Cooperatives on Standardised Chemical Fertilisers, B.E. 2559 (2016) 3.3. Notification of Ministry of Agriculture and Cooperatives on the Required Organic Matter Content in Organic Chemical Fertilisers under the Fertiliser Act, B.E. 2518 (1975), as amended by the Fertiliser Act (No. 2), B.E. 2550 (2007), B.E. 2554 (2011) 3.4. Notification of Department of Agriculture on Criteria and Methods for Sampling Fertilisers or Suspected Fertilisers in Reasonable Quantities for Inspection or Analysis (No. 2), B.E. 2557 (2014)

Activity	Applicable Laws
	3.5. Notification of Department of Agriculture on Organic Fertiliser Standards, B.E. 2557 (2014) 4. Act on the Maintenance of the Cleanliness and Orderliness of the Country, B.E. 2535 (1992) and amendments no.2 B.E. 2560 (2017) 5. Town Planning Act, B.E. 2562 (2019) 5.1. Notification of Ministry of Interior on Waste Management, B.E. 2567 (2024)
2. Composting of bio-waste	1. The Enhancement and Conservation of National Environment Quality Act, B.E.2535 (1992) and (No. 2) B.E. 2561 (2018) 1.1. Notification of the Ministry of Natural Resources and Environment on Establishment of controlling standards for wastewater from industrial factories, industrial estates and industrial zones, B.E. 2559 (2016). 1.2. Notification of the Ministry of Natural Resources and Environment Prescribing Standards for Controlling Air Emissions from factory 1.3. Notification of the Ministry of Natural Resources and Environment on Prescribing of Factory Types and Sizes, Procedure for the Control of Discharges of Waste Water that Cause Adverse Effects on the Public Water Bodies and Environment 1.4. Notification of the Ministry of Natural Resources and Environment on Prescribing Standards for Controlling Odor Intensity Emission from Pollution Sources 1.5. Notification of Pollution Control Department on Guidelines for Considering the Suitability of Areas for Designing, Constructing, and Managing Sanitary Landfill Facility B.E. 2560 (2017) 2. Public Health Act, B.E. 2535 (1992)

Activity	Applicable Laws
	2.1. Ministerial Regulation of Public Health on the Management of Toxic or Hazardous Waste from Communities, B.E. 2563 (2020) 2.2. Ministerial Regulation of Public Health on the Joint management of Infectious Waste between Local Government Authorities and other Local Government Agencies or State Agencies, B.E. 2564 (2021) 2.3. Ministerial Regulation of Public Health on the Disposal of Infectious Waste (No. 2), B.E. 2564 (2021) 2.4. Ministerial Regulation of Public Health on Sanitary Standards for General Waste Management, B.E. 2560 (2017) 2.5. Notification of the Ministry of Public Health on Control Measures for the Transport of Infectious Waste to Prevent Illegal Dumping, B.E. 2565 (2022) 2.6. Notification of the Ministry of Public Health on Criteria for Selecting Sanitary Landfill Facilities, B.E. 2560 (2017) 2.7. Notification of the Ministry of Public Health on Characteristics and Conditions for Preventing Groundwater Contamination from Leachate, B.E. 2560 (2017) 2.8. Notification of the Ministry of Public Health on Businesses Hazardous to Health, B.E. 2558 (2015) 3. Fertiliser Act, B.E. 2518 (1975) and its Amendments 3.1. Ministerial Regulation on Fees for Fertiliser-related Business Operations, B.E. 2554 (2011) 3.2. Notification of Ministry of Agriculture and Cooperatives on Standardised Chemical Fertilisers, B.E. 2559 (2016) 3.3. Notification of Ministry of Agriculture and Cooperatives on the Required Organic Matter Content in Organic Chemical Fertilisers under the Fertiliser Act, B.E. 2518 (1975), as amended by the Fertiliser Act (No. 2), B.E. 2550 (2007), B.E. 2554 (2011)

Activity	Applicable Laws
	3.4. Notification of Department of Agriculture on Criteria and Methods for Sampling Fertilisers or Suspected Fertilisers in Reasonable Quantities for Inspection or Analysis (No. 2), B.E. 2557 (2014) 3.5. Notification of Department of Agriculture on Organic Fertiliser Standards, B.E. 2557 (2014) 4. Act on the Maintenance of the Cleanliness and Orderliness of the Country, B.E. 2535 (1992) and amendments no. 2 B.E. 2560 (2017) 5. Notification of Ministry of Interior on Waste management, B.E. 2567 (2024) 6. Town Planning Act, B.E. 2562 (2019) 7. Hazardous Substances Act, B.E. 2535 (1992) and its Amendments
3. Collection and Transport of Waste	1. The Enhancement and Conservation of National Environment Quality Act, B.E.2535 (1992) and (No. 2) B.E. 2561 (2018) 1.1. Notification of Ministry of Natural Resources and Environment on Noise standards for Three-Wheeled Vehicles 1.2. Notification of the Ministry of Natural Resources and Environment on Descriptions of Factory Types and Sizes, Procedure for the Control of Discharges of Waste Water that cause Adverse Effects on the Public Water Bodies and Environment 1.3. Notification of the Ministry of Natural Resources and Environment on Prescribing Standards for Controlling Odour Intensity Emission from Pollution Sources 2. Public Health Act, B.E. 2535 (1992) 2.1. Ministerial Regulation of Public Health on the Management of Toxic or Hazardous Waste from Communities, B.E. 2563 (2020) 2.2. Ministerial Regulation of Public Health on the Joint management of Infectious Waste between Local

Activity	Applicable Laws
	Government Authorities and other Local Government Agencies or State Agencies, B.E. 2564 (2021) 2.3. Ministerial Regulation of Public Health on the Disposal of Infectious Waste (No. 2), B.E. 2564 (2021) 2.4. Ministerial Regulation of Public Health on Sanitary Standards for General Waste Management, B.E. 2560 (2017) 2.5. Notification of the Ministry of Public Health on Control Measures for the Transport of Infectious Waste to Prevent Illegal Dumping, B.E. 2565 (2022) 2.6. Notification of the Ministry of Public Health on Criteria for Selecting Sanitary Landfill Facilities, B.E. 2560 (2017) 2.7. Notification of the Ministry of Public Health on Characteristics and Conditions for Preventing Groundwater Contamination from Leachate, B.E. 2560 (2017) 3. Act on the Maintenance of the Cleanliness and Orderliness of the Country, B.E. 2535 (1992) and amendments no. 2 B.E. 2560 (2017) 4. Notification of Ministry of Interior on Waste Management, B.E. 2567 (2024) 5. Town Planning Act, B.E. 2562 (2019) 6. Factory Act, B.E. 2535 (1992) 6.1. Notification of Ministry of Industry on Prescribing Limits of Air Pollutants Emitted from Chimneys in Relation to Hazardous Waste from Industries, B.E. 2545 (2002), dated October 2, 2002 6.2. Notification of Ministry of Industry on Prescribing Limits of Air Pollutants Emitted from Factories in Relation to Hazardous Waste, B.E. 2549 (2006), dated October 31, 2006 6.3. Notification of Ministry of Industry on Standards for Controlling Wastewater Discharge from Factories, B.E. 2560 (2017), dated June 7, 2017

Activity	Applicable Laws
	6.4. Ministerial Regulation No. 2 (B.E. 2535) Issued under the Factory Act, B.E. 2535 (1992) 7. Machinery Registration Act, B.E. 2514 (1971) 7.1. Ministerial Regulation No. 1 and No. 2 (B.E. 2514) Issued under the Machinery Registration Act, B.E. 2514 (1971) 7.2. Ministerial Regulation on Criteria, Methods, and Conditions for Machinery Trial Operation, B.E. 2553 (2010) 7.3. Ministerial Regulation on Fees for Machinery Registration, B.E. 2560 (2017) 8. Hazardous Substances Act, B.E. 2535 (1992) and its Amendments 8.1. Notification of Ministry of Industry on the Transport of Hazardous Substances under the Responsibility of the Department of Industrial Works, B.E. 2558 (2015) 8.2. Notification of Department of Industrial Works on the Application form for Initial Compensation for Government or Private Entities assigned by Government Agencies, B.E. 2567 (2024) 8.3. Notification of Ministry of Industry on the Registration of Containers Used for Transporting Hazardous Substances under the Responsibility of the Department of Industrial Works, B.E. 2558 (2015) 8.4. Notification of Ministry of Industry on Liability Insurance for the Transport of Hazardous Substances, B.E. 2559 (2016)
4. Depollution and dismantling of end-of-life products	1. The Enhancement and Conservation of National Environment Quality Act, B.E.2535 (1992) and (No. 2) B.E. 2561 (2018) 1.1. Notification of the Ministry of Natural Resources and Environment, Establishment of controlling standards for wastewater from industrial factories, industrial estates and industrial zones, B.E. 2559 (2016).

Activity	Applicable Laws
	1.2. Notification of the Ministry of Natural Resources and Environment Prescribing Standards for Controlling Air Emissions from factory 1.3. Notification of the Ministry of Natural Resources and Environment on Descriptions of Factory Types and Sizes of Industrial Factories as Pollution Sources Subject to Odor Intensity Control for Air Emissions 1.4. Notification of the Ministry of Natural Resources and Environment Prescribing Standards for Controlling Odor Intensity Emission from Pollution Sources 1.5. Notification of the Ministry of Natural Resources and Environment Descriptions of Factory Types and Sizes, Procedure for the Control of Discharges of Waste Water that Cause Adverse Effects on the Public Water Bodies and Environment 2. Public Health Act, B.E. 2535 (1992) 2.1. Ministerial Regulation of Public Health on the Management of Toxic or Hazardous Waste from Communities, B.E. 2563 (2020) 2.2. Ministerial Regulation of Public Health on the Joint Management of Infectious Waste Between Local Government Authorities and Other Local Government Agencies or State Agencies, B.E. 2564 (2021) 2.3. Ministerial Regulation of Public Health on the Disposal of Infectious Waste (No. 2), B.E. 2564 (2021) 2.4. Ministerial Regulation of Public Health on Sanitary Standards for General Waste Management, B.E. 2560 (2017) 2.5. Notification of the Ministry of Public Health on Control Measures for the Transport of Infectious Waste to Prevent Illegal Dumping, B.E. 2565 (2022)

Activity	Applicable Laws
	2.6. Notification of the Ministry of Public Health on Criteria for Selecting Sanitary Landfill Facilities, B.E. 2560 (2017) 2.7. Notification of the Ministry of Public Health on Characteristics and Conditions for Preventing Groundwater Contamination from Leachate, B.E. 2560 (2017) 3. Act on the Maintenance of the Cleanliness and Orderliness of the Country, B.E. 2535 (1992) and amendments No.2 B.E. 2560 (2017) 3.1. Notification of Ministry of Interior on Waste Management, B.E. 2567 (2024 4. Town Planning Act, B.E. 2562 (2019) 5. Factory Act B.E. 2535 (1992) 5.1. Notification of the Ministry of Industry on Requiring factories to install special equipment or devices to report air pollution from factory chimneys, B.E. 2565 (2022), dated April 1, 2022 5.2. Notification of the Ministry of Industry on Specifying the types and sizes of factories, methods for controlling the release of waste, pollution, or any substances affecting the environment, qualifications of supervisors and operators, and criteria for registering supervisors for environmental protection systems, B.E. 2545 (2002), dated April 5, 2002 5.3. Notification of the Ministry of Industry on Setting air pollutant concentration limits for emissions from chimneys containing hazardous industrial waste, B.E. 2545 (2002), dated October 2, 2002.2545 5.4. Notification of the Ministry of Industry on Setting air pollutant concentration limits for emissions from factories, B.E. 2549 (2006), dated October 31, 2006 5.5. Notification of the Ministry of Industry on (Supplement No. 2) on specifying factory types and sizes, controlling the release of waste, pollution, or substances affecting the environment, qualifications of supervisors and operators, and

Activity	Applicable Laws
	criteria for registering supervisors for environmental protection systems, B.E. 2554 (2011), dated January 31, 2012 5.6. Notification of the Ministry of Industry on Prescribing wastewater discharge standards for factories, B.E. 2560 (2017), dated June 7, 2017 5.7. Ministerial Regulation of the Ministry of Industry on controlling soil and groundwater contamination within factory premises, B.E. 2559 (2016) 5.8. Notification of the Ministry of Industry on the responsibilities of lead smelting factory operators regarding waste, refuse, and unused materials disposal, dated April 27, 2001 5.9. Notification of the Ministry of Industry on safety measures for lead smelting factories processing used batteries, dated April 27, 2001 5.10. Notification of the Ministry of Industry on reporting requirements for lead smelting factories processing used batteries, dated April 27, 2001 5.11. Notification of the Ministry of Industry on the Management of Waste and Unused Materials, B.E. 2566 (2023). 5.12. Notification of the Ministry of Industry on (Supplement No. 2) on the Management of Waste and Unused Materials, B.E. 2566 (2023), dated August 15, 2023. 5.13. Notification of the Ministry of Science, Technology, and Environment on Prescribing criteria, procedures, regulations, and guidelines for preparing Environmental Impact Assessment (EIA) reports, issued under the National Environmental Quality Promotion and Conservation Act, B.E. 2535 (1992) 5.14. Ministerial Regulation No. 2 (B.E. 2535/1992) Issued under the Factory Act, B.E. 2535 (1992)

Activity	Applicable Laws
	5.15. Notification of the Ministry of Industry on Prescribing types or Categories of Factories Engaged in Service Industries or Industries Providing Services to Communities, B.E. 2545 (2002) 5.16. Notification of the Ministry of Industry on Prescribing Factory Types and Sizes, Methods for Controlling the Release of Waste, Pollution, or Substances Affecting the Environment, Qualifications of Supervisors and Operators, and Criteria for Registering Supervisors for Environmental Protection Systems, B.E. 2545 (2002) and amendments No.2 B.E. 2554 (2011) 5.17. Notification of the Department of Industrial Works on the Qualifications, Training, and Examination Standards for Environmental Personnel in Factories, B.E. 2554 (2011) 5.18. Notification of the Department of Industrial Works on Registration Requirements for Pollution Control System Operators in Wastewater Treatment, Air Pollution Control, and Industrial Waste Management, B.E. 2556 (2013). 5.19. Notification of the Department of Industrial Works on the Notification and Registration of Environmental Personnel in Factories, B.E. 2556 (2013) 6. Hazardous Substances Act, B.E. 2535 (1992) and its Amendments 7. The Machinery Registration Act, B.E. 2514 (1971) 7.1. Ministerial Regulations No. 1 and No. 2 (B.E. 2514) Issued under the Machinery Registration Act, B.E. 2514 (1971) 7.2. Ministerial Regulation on the Criteria, Procedures, and Conditions for Testing Machinery, B.E. 2553 (2010) 7.3. Ministerial Regulation on Registration Fees for Machinery, B.E. 2560 (2017)
5. Waste-to-Energy (WtE)	1. The Enhancement and Conservation of National Environment Quality Act, B.E.2535 (1992) and (No. 2) B.E. 2561 (2018)

Activity	Applicable Laws
	1.1. Notification of the Ministry of Natural Resources and Environment on Establishment of controlling standards for wastewater from industrial factories, industrial estates and industrial zones, B.E. 2559 (2016). 1.2. Notification of the Ministry of Natural Resources and Environment Prescribing Standards for Controlling Air Emissions from factory 1.3. Notification of the Ministry of Natural Resources and Environment on Designating New Power Plants as Sources of Pollution Subject to Control over the Release of Air Pollutants into the Atmosphere 1.4. Notification of the Ministry of Natural Resources and Environment on Establishing Standards for Controlling the Release of Air Pollutants from New Power Plants 1.5. Notification of the Ministry of Natural Resources and Environment on Designating Certain Types and Sizes of Industrial Factories as Sources of Pollution Subject to Control over Odor Intensity of Air Emissions Released into the Atmosphere 1.6. Notification of the Ministry of Natural Resources and Environment Prescribing Standards for Controlling Odor Intensity Emission from Pollution Sources 1.7. Notification of the Ministry of Natural Resources and Environment on Establishing Standards for Controlling the Release of Air Pollutants from Incinerators for Infectious Waste 1.8. Notification of the Ministry of Natural Resources and Environment on Establishing Standards for Controlling the Release of Air Pollutants from Waste Incinerators 1.9. Notification of the Pollution Control Department on the Criteria for Assessing the Suitability of Sites for the Design,

Activity	Applicable Laws
	Construction, and Management of Waste Disposal Facilities Using Incinerators, B.E. 2560 (2017) 1.10. Notification of the Pollution Control Department on the Preliminary Suitable Characteristics of Waste-derived Fuel from Municipal Solid Waste, B.E. 2561 (2018) 1.11. Notification of the Pollution Control Department on Guidelines for Efficient Waste Management Using Incinerators, B.E. 2561 (2018) 2. Public Health Act, B.E. 2535 (1992) 2.1. Ministerial Regulation of the Ministry of Public Health on the Management of Hazardous or Toxic Waste from Communities, B.E. 2563 (2020) 2.2. Ministerial Regulation of the Ministry of Public Health on the Joint Management of Infectious Waste Between Local Government Authorities and Other Local Government Authorities or State Agencies, B.E. 2564 (2021) 2.3. Ministerial Regulation of the Ministry of Public Health on the Disposal of Infectious Waste (No. 2), B.E. 2564 (2021) 2.4. Ministerial Regulation of the Ministry of Public Health on Sanitary Management of General Waste, B.E. 2560 (2017) 2.5. Notification of the Ministry of Public Health on Control Measures for the Supervision of Infectious Waste Transportation to Prevent Illegal Dumping, B.E. 2565 (2022) 2.6. Notification of the Ministry of Public Health on Criteria for Selecting Suitable Locations for Sanitary Landfills, B.E. 2560 (2017) 2.7. Notification of the Ministry of Public Health on Characteristics and Conditions for Preventing Groundwater Contamination from Leachate, B.E. 2560 (2017) 3. Act on the Maintenance of the Cleanliness and Orderliness of the Country, B.E. 2535 (1992) and amendments No.2 B.E. 2560 (2017)

Activity	Applicable Laws
	4. Notification of Ministry of Interior on Waste management, B.E. 2567 (2024) 5. Town Planning Act, B.E. 2562 (2019) 6. Factory Act B.E. 2535 (1992) 6.1. Notification of the Ministry of Industry on Requiring factories to install special equipment or devices to report air pollution from factory chimneys, B.E. 2565 (2022), dated April 1, 2022 6.2. Notification of the Ministry of Industry on Specifying the types and sizes of factories, methods for controlling the release of waste, pollution, or any substances affecting the environment, qualifications of supervisors and operators, and criteria for registering supervisors for environmental protection systems, B.E. 2545 (2002), dated April 5, 2002 6.3. Notification of the Ministry of Industry on Setting air pollutant concentration limits for emissions from chimneys containing hazardous industrial waste, B.E. 2545 (2002), dated October 2, 2002 6.4. Notification of the Ministry of Industry on Setting air pollutant concentration limits for emissions from factories, B.E. 2549 (2006), dated October 31, 2006 6.5. Notification of the Department of Industrial Works Regarding The Submission of Data to the Continuous Emission Monitoring Systems (CEMS) for Air Quality from Stacks B.E. 2550, dated October 10, 2007 6.6. Notification of the Ministry of Industry on Prescribing Factory Types and Sizes, Methods for Controlling the Release of Waste, Pollution, or Substances Affecting the Environment, Qualifications of Supervisors and Operators, and Criteria for Registering Supervisors for Environmental Protection Systems (No. 2), B.E. 2554 (2011), dated 31 January 2012

Activity	Applicable Laws
	6.7. Notification of the Ministry of Industry on Prescribing wastewater discharge standards for factories, B.E. 2560 (2017), dated June 7, 2017 6.8. Ministerial Regulation of the Ministry of Industry on controlling soil and groundwater contamination within factory premises, B.E. 2559 (2016) 6.9. Notification of the Ministry of Industry on Prescribing the Permissible Amounts of Airborne Contaminants Emitted from Incinerators for Hazardous Waste or Discarded Materials from Industries, B.E. 2545 (2002), dated 30 October 2002. 6.10. Notification of the Ministry of Industry on the Management of Waste or Discarded Materials, B.E. 2566 (2023). 6.11. Notification of the Ministry of Industry on (Supplement No. 2) on the Management of Waste and Unused Materials, B.E. 2566 (2023), dated August 15, 2023 6.12. Notification of the Department of Industrial Works on Prescribing Types or Categories of Factories Required to Prepare Reports on the Types and Quantities of Pollutants Emitted from Factories, B.E. 2553 (2010). 6.13. Notification of the Ministry of Science, Technology, and Environment on Prescribing Criteria, Methods, Procedures, and Guidelines for the Preparation of Environmental Impact Assessment Reports under the Enhancement and Conservation of National Environmental Quality Act, B.E. 2535 (1992). 6.14. Ministerial Regulation No. 2 (B.E. 2535) Issued under the Factory Act, B.E. 2535 (1992) 6.15. Notification of the Ministry of Industry on the Specification of Types or Categories of Factories Engaging in Service Industries or Industries Providing Services to Communities B.E. 2545

Activity	Applicable Laws
	6.16. Notification of the Ministry of Industry on the Specification of Types and Sizes of Factories, the Specification of Methods for Controlling the Discharge of Waste, Pollutants, or Any Substances Affecting the Environment, the Specification of Qualifications for Supervisors and Regular Operators, and the Criteria for the Registration of Supervisors for Environmental Protection Systems B.E. 2545 and its Amendments No. 2 B.E. 2554 6.17. Notification of the Department of Industrial Works on the Qualifications, Training, and Examination Standards for Factory Environmental Personnel B.E. 2554 6.18. Notification of the Department of Industrial Works on the Registration as a Supervisor of Wastewater Treatment Systems, Air Pollution Control Systems, or Industrial Waste Management Systems B.E. 2556 6.19. Notification of the Department of Industrial Works on the Reporting and Notification of the Presence of Factory Environmental Personnel B.E. 2556 7. Hazardous Substances Act B.E. 2535 and its Amendments 8. Machinery Registration Act B.E. 2514 8.1. Ministerial Regulations No. 1 and No. 2 (B.E. 2514) Issued under the Machinery Registration Act B.E. 2514 8.2. Ministerial Regulation on Criteria, Procedures, and Conditions for Machinery Trial Operations B.E. 2553 8.3. Ministerial Regulation on Registration Fees for Machinery B.E. 2560 9. Energy Industry Act B.E. 2550 10. Royal Decree Prescribing Types, Sizes, and Characteristics of Energy Businesses Exempted from Licensing under the Energy Industry Act B.E. 2552

Activity	Applicable Laws
	10.1. Notification of the Energy Regulatory Commission on Criteria, Procedures, and Conditions for License Renewal B.E. 2551 10.2. Notification of the Energy Regulatory Commission Prescribing that Energy Businesses Exempted from Licensing Must Provide Notification B.E. 2551 10.3. Notification of the Energy Regulatory Commission on Classification and Validity of Energy Industry Licenses B.E. 2551 10.4. Notification of the Energy Regulatory Commission on Criteria, Procedures, and Conditions for the Transfer of Rights under an Energy Industry License B.E. 2552 10.5. Notification of the Energy Regulatory Commission on Criteria, Procedures, and Conditions for the Commencement of Electricity Business Operations B.E. 2552 10.6. Notification of the Energy Regulatory Commission on Criteria, Procedures, and Conditions for the Suspension and Revocation of Energy Industry Licenses B.E. 2555 10.7. Notification of the Energy Regulatory Commission on Criteria, Procedures, and Conditions for the Suspension or Cessation of Energy Supply Services B.E. 2559 10.8. Notification of the Energy Regulatory Commission on Measures for Prevention, Mitigation, and Environmental Impact Monitoring for Power Producers Using Municipal Solid Waste as Fuel with an Installed Capacity of Less Than 10 Megawatts B.E. 2559 and its Second Amendment B.E. 2561 10.9. Notification of the Energy Regulatory Commission on Measures for Prevention, Mitigation, and Environmental Impact Monitoring for Power Producers Using Municipal

Activity	Applicable Laws
	Solid Waste as Fuel with an Installed Capacity of 10 Megawatts or More B.E. 2559 and its Second Amendment B.E. 2561 10.10. Notification of the Energy Regulatory Commission on Criteria, Procedures, and Conditions for the Preparation and Submission of Energy Business-Related Information B.E. 2561 10.11. Notification of the Energy Regulatory Commission on the Termination of Energy Business Operations B.E. 2561 10.12. Notification of the Energy Regulatory Commission on the Calculation Formula for Feed-in Tariff Variable Component (FiTV) for Electricity Generation from Renewable Energy and the FiTV Rate for the Year B.E. 2563 10.13. Regulations on Power Purchase from Small Power Producers Specifically for Renewable Energy-Based Power Generation B.E. 2550 (Revised B.E. 2552 and B.E. 2553) 10.14. Regulations of the Energy Regulatory Commission Prescribing License Fees and Energy Business Operation Fees B.E. 2551 10.15. Regulations of the Energy Regulatory Commission on Licensing and Energy Business Operation B.E. 2551, as Amended (Second Amendment B.E. 2557 and Third Amendment B.E. 2560) 10.16. Regulations of the Energy Regulatory Commission on Engineering Standards for Energy Business Operations B.E. 2553 10.17. Regulations of the Energy Regulatory Commission on Standards, Inspection Procedures, and Certification of Grid-Connected Equipment for Electricity Distribution Systems B.E. 2559

Activity	Applicable Laws
	10.18. Regulations of the Energy Regulatory Commission on Standards, Inspection Procedures, and Certification of Low-Voltage Grid-Connected Inverter Equipment B.E. 2559 10.19. Regulations of the Energy Regulatory Commission on Public Hearings and Stakeholder Engagement in the Consideration of Electricity Generation Licenses B.E. 2559 10.20. Regulations of the Energy Regulatory Commission on Procedures for Applying for Electricity Business Licenses under Section 47 and Permissions under Section 48 of the Energy Industry Act B.E. 2550 10.21. Regulations of the Energy Regulatory Commission on Standards, Inspection Procedures, and Certification of Grid-Connected Equipment for Electricity Transmission Systems B.E. 2560 10.22. Regulations of the Energy Regulatory Commission on Public Consultation Processes for Projects or Operations That May Have Significant Environmental, Health, or Social Impacts B.E. 2562 10.23. Regulations on Power Purchase from Very Small Power Producers (for Renewable Energy-Based Power Generation) 10.24. Order of the Energy Regulatory Commission No. 61/2555 on Guidelines for Regulating Power Purchase from Renewable Energy Producers 10.25. Order of the Head of the National Council for Peace and Order No. 4/2559 on Exemption from Enforcement of Ministerial Regulations on Comprehensive City Planning for Certain Businesses
6. **Landfill gas capture and utilisation**	1. The Enhancement and Conservation of National Environment Quality Act, B.E.2535 (1992) and (No. 2) B.E. 2561 (2018) 1.1. Notification of the Ministry of Natural Resources and Environment, Establishment of controlling standards for

Activity	Applicable Laws
	wastewater from industrial factories, industrial estates and industrial zones, B.E. 2559 (2016). 1.2. Notification of the Ministry of Natural Resources and Environment Prescribing Standards for Controlling Air Emissions from factory 1.3. Notification of the Ministry of Natural Resources and Environment on Descriptions of Factory Types and Sizes of Industrial Factories as Pollution Sources Subject to Odor Intensity Control for Air Emissions 1.4. Notification of the Ministry of Natural Resources and Environment Prescribing Standards for Controlling Odor Intensity Emission from Pollution Sources 1.5. Notification of the Ministry of Natural Resources and Environment Descriptions of Factory Types and Sizes, Procedure for the Control of Discharges of Waste Water that Cause Adverse Effects on the Public Water Bodies and Environment 1.6. Notification of Pollution Control Department on Guidelines for Considering the Suitability of Areas for Designing, Constructing, and Managing Sanitary Landfill Facility B.E. 2560 (2017) 2. Public Health Act, B.E. 2535 (1992) 2.1. Ministerial Regulation of the Ministry of Public Health on the Management of Hazardous or Toxic Waste from Communities, B.E. 2563 (2020) 2.2. Ministerial Regulation of the Ministry of Public Health on the Joint Management of Infectious Waste Between Local Government Authorities and Other Local Government Authorities or State Agencies, B.E. 2564 (2021) 2.3. Ministerial Regulation of the Ministry of Public Health on the Disposal of Infectious Waste (No. 2), B.E. 2564 (2021)

Activity	Applicable Laws
	2.4. Ministerial Regulation of the Ministry of Public Health on Sanitary Management of General Waste, B.E. 2560 (2017) 2.5. Notification of the Ministry of Public Health on Control Measures for the Supervision of Infectious Waste Transportation to Prevent Illegal Dumping, B.E. 2565 (2022) 2.6. Notification of the Ministry of Public Health on Criteria for Selecting Suitable Locations for Sanitary Landfills, B.E. 2560 (2017) 2.7. Notification of the Ministry of Public Health on Characteristics and Conditions for Preventing Groundwater Contamination from Leachate, B.E. 2560 (2017) 3. Act on the Maintenance of the Cleanliness and Orderliness of the Country, B.E. 2535 (1992) and amendments No.2 B.E. 2560 (2017) 3.1. Notification of the Ministry of Interior on Waste Management B.E. 2567 4. Town Planning Act, B.E. 2562 (2019) 5. Factory Act B.E. 2535 (1992) 5.1. Notification of the Ministry of Industry on Requiring factories to install special equipment or devices to report air pollution from factory chimneys, B.E. 2565 (2022), dated April 1, 2022 5.2. Notification of the Ministry of Industry on Specifying the types and sizes of factories, methods for controlling the release of waste, pollution, or any substances affecting the environment, qualifications of supervisors and operators, and criteria for registering supervisors for environmental protection systems, B.E. 2545 (2002), dated April 5, 2002 5.3. Notification of the Ministry of Industry on Setting air pollutant concentration limits for emissions from chimneys containing hazardous industrial waste, B.E. 2545 (2002), dated October 2, 2002

Activity	Applicable Laws
	5.4. Notification of the Ministry of Industry on Setting air pollutant concentration limits for emissions from factories, B.E. 2549 (2006), dated October 31, 2006 5.5. Notification of the Ministry of Industry on (Supplement No. 2) on specifying factory types and sizes, controlling the release of waste, pollution, or substances affecting the environment, qualifications of supervisors and operators, and criteria for registering supervisors for environmental protection systems, B.E. 2554 (2011), dated January 31, 2012 5.6. Notification of the Ministry of Industry on Prescribing wastewater discharge standards for factories, B.E. 2560 (2017), dated June 7, 2017 5.7. Ministerial Regulation of the Ministry of Industry on controlling soil and groundwater contamination within factory premises, B.E. 2559 (2016) 5.8. Notification of the Ministry of Industry Regarding The Duties of Operators of Lead Smelting Factories from Used Batteries Concerning the Disposal of Waste, Refuse, and Unused Materials, dated April 27, 2001 5.9. Notification of the Ministry of Industry Regarding Safety Protection Measures in the Operation of Lead Smelting Factories from Used Batteries Dated April 27, 2001 5.10. Notification of the Ministry of Industry on the Management of Waste or Discarded Materials, B.E. 2566 (2023). 5.11. Notification of the Ministry of Industry on (Supplement No. 2) on the Management of Waste and Unused Materials, B.E. 2566 (2023), dated August 15, 2023 5.12. Notification of the Department of Industrial Works on Prescribing Types or Categories of Factories Required to Prepare Reports on the Types and Quantities of Pollutants Emitted from Factories, B.E. 2553 (2010).

Activity	Applicable Laws
	5.13. Notification of the Ministry of Science, Technology, and Environment on Prescribing Criteria, Methods, Procedures, and Guidelines for the Preparation of Environmental Impact Assessment Reports under the Enhancement and Conservation of National Environmental Quality Act, B.E. 2535 (1992). 5.14. Ministerial Regulation No. 2 (B.E. 2535) Issued under the Factory Act, B.E. 2535 (1992) 5.15. Notification of the Ministry of Industry on the Specification of Types or Categories of Factories Engaging in Service Industries or Industries Providing Services to Communities B.E. 2545 5.16. Notification of the Ministry of Industry on the Specification of Types and Sizes of Factories, the Specification of Methods for Controlling the Discharge of Waste, Pollutants, or Any Substances Affecting the Environment, the Specification of Qualifications for Supervisors and Regular Operators, and the Criteria for the Registration of Supervisors for Environmental Protection Systems B.E. 2545 and its Amendments No. 2 B.E. 2554 5.17. Notification of the Department of Industrial Works on the Qualifications, Training, and Examination Standards for Factory Environmental Personnel B.E. 2554 5.18. Notification of the Department of Industrial Works on the Registration as a Supervisor of Wastewater Treatment Systems, Air Pollution Control Systems, or Industrial Waste Management Systems B.E. 2556 5.19. Notification of the Department of Industrial Works on the Reporting and Notification of the Presence of Factory Environmental Personnel B.E. 2556 6. Fertiliser Act, B.E. 2518 (1975) and its Amendments

Activity	Applicable Laws
	6.1. Ministerial Regulation on Fees for Fertiliser-related Business Operations, B.E. 2554 (2011) 6.2. Notification of Ministry of Agriculture and Cooperatives on Standardised Chemical Fertilisers, B.E. 2559 (2016) 6.3. Notification of Ministry of Agriculture and Cooperatives on the Required Organic Matter Content in Organic Chemical Fertilisers under the Fertiliser Act, B.E. 2518 (1975), as amended by the Fertiliser Act (No. 2), B.E. 2550 (2007), B.E. 2554 (2011) 6.4. Notification of Department of Agriculture on Criteria and Methods for Sampling Fertilisers or Suspected Fertilisers in Reasonable Quantities for Inspection or Analysis (No. 2), B.E. 2557 (2014) 6.5. Notification of Department of Agriculture on Organic Fertiliser Standards, B.E. 2557 (2014) 7. Hazardous Substances Act B.E. 2535 and its Amendments 8. Machine Registration Act B.E. 2514 8.1. Ministerial Regulation No. 1 and No. 2 (B.E. 2514) Issued under the Machine Registration Act B.E. 2514 8.2. Ministerial Regulation on the Guidelines, Procedures, and Conditions for Machine Trial Runs B.E. 2553 8.3. Ministerial Regulation on Fees Related to Machine Registration B.E. 2560
7. **Remediation of contaminated sites and areas**	1. The Enhancement and Conservation of National Environment Quality Act, B.E.2535 (1992) and (No. 2) B.E. 2561 (2018) 1.1. Notification of Ministry of Natural Resources and Environment on Noise standards for Three-Wheeled Vehicles 1.2. Notification of the Pollution Control Department on the Guidelines for Hazardous Waste Management from Communities for Local Administrative Organizations, B.E. 2560 (2017)

Activity	Applicable Laws
	1.3. Notification of the Pollution Control Department on the Criteria for Considering the Suitability of Locations for the Design and Construction of Waste Transfer Stations, B.E. 2560 (2017) 1.4. Notification of the Pollution Control Department on the Criteria for the Design and Construction of Facilities for Sorting and Processing Community Waste to Produce Waste-derived Fuel, B.E. 2561 (2018) 2. Public Health Act, B.E. 2535 (1992) 2.1. Ministerial Regulation of Public Health on the Management of Toxic or Hazardous Waste from Communities, B.E. 2563 (2020) 2.2. Ministerial Regulation of Public Health on the Joint Management of Infectious Waste Between Local Government Authorities and Other Local Government Agencies or State Agencies, B.E. 2564 (2021) 2.3. Ministerial Regulation of Public Health on the Disposal of Infectious Waste (No. 2), B.E. 2564 (2021) 2.4. Ministerial Regulation of Public Health on Sanitary Standards for General Waste Management, B.E. 2560 (2017) 2.5. Notification of the Ministry of Public Health on Control Measures for the Transport of Infectious Waste to Prevent Illegal Dumping, B.E. 2565 (2022) 2.6. Notification of the Ministry of Public Health on Criteria for Selecting Sanitary Landfill Facilities, B.E. 2560 (2017) 2.7. Notification of the Ministry of Public Health on Characteristics and Conditions for Preventing Groundwater Contamination from Leachate, B.E. 2560 (2017) 3. Act on the Maintenance of the Cleanliness and Orderliness of the Country, B.E. 2535 (1992), and Amendment (No. 2), B.E. 2560 (2017)

Activity	Applicable Laws
	4. Fertiliser Act, B.E. 2518 (1975) and its Amendments 4.1. Ministerial Regulation on Fees for Fertiliser-related Business Operations, B.E. 2554 (2011) 4.2. Notification of Ministry of Agriculture and Cooperatives on Standardised Chemical Fertilisers, B.E. 2559 (2016) 4.3. Notification of Ministry of Agriculture and Cooperatives on the Required Organic Matter Content in Organic Chemical Fertilisers under the Fertiliser Act, B.E. 2518 (1975), as amended by the Fertiliser Act (No. 2), B.E. 2550 (2007), B.E. 2554 (2011) 4.4. Notification of Department of Agriculture on Criteria and Methods for Sampling Fertilisers or Suspected Fertilisers in Reasonable Quantities for Inspection or Analysis (No. 2), B.E. 2557 (2014) 4.5. Notification of Department of Agriculture on Organic Fertiliser Standards, B.E. 2557 (2014) 5. Town Planning Act, B.E. 2562 (2019 6. Notification of the Ministry of Interior on Waste Management B.E. 2567 7. Control of Sale by Auction and Trade of Antiques Act, B.E. 2474 (1931) and Amendments (Nos. 1-5) 7.1. Ministry of Interior's Regulation on the Control of Sale by Auction and Trade of Antiques, B.E. 2533 (1990) 7.2. Ministerial Regulation No. 9 (B.E. 2548 / 2005) Issued under the Control of Sale by Auction and Trade of Antiques Act, B.E. 2474 (1931)
8. **Remediation of legally non-conforming landfills and abandoned or illegal waste dumps**	1. The Enhancement and Conservation of National Environment Quality Act, B.E.2535 (1992) and (No. 2) B.E. 2561 (2018) 2. Public Health Act, B.E. 2535 (1992)

Activity	Applicable Laws
	2.1. Ministerial Regulation of Public Health on the Management of Toxic or Hazardous Waste from Communities, B.E. 2563 (2020) 2.2. Ministerial Regulation of Public Health on the Joint Management of Infectious Waste Between Local Government Authorities and Other Local Government Agencies or State Agencies, B.E. 2564 (2021) 2.3. Ministerial Regulation of Public Health on the Disposal of Infectious Waste (No. 2), B.E. 2564 (2021) 2.4. Ministerial Regulation of Public Health on Sanitary Standards for General Waste Management, B.E. 2560 (2017) 2.5. Notification of the Ministry of Public Health on Control Measures for the Transport of Infectious Waste to Prevent Illegal Dumping, B.E. 2565 (2022) 2.6. Notification of the Ministry of Public Health on Criteria for Selecting Sanitary Landfill Facilities, B.E. 2560 (2017) 2.7. Notification of the Ministry of Public Health on Characteristics and Conditions for Preventing Groundwater Contamination from Leachate, B.E. 2560 (2017) 3. Act on the Maintenance of the Cleanliness and Orderliness of the Country, B.E. 2535 (1992), and Amendment (No. 2), B.E. 2560 (2017) 4. Town Planning Act, B.E. 2562 (2019) 5. Factory Act B.E. 2535 (1992) 5.1. Ministerial Notification on the Requirement for Factories to Install Instruments or Special Equipment to Report Air Pollution from Factory Stacks, B.E. 2565 (2022), dated April 1, 2022 5.2. Ministerial Notification on the Types and Sizes of Factories, Methods for Controlling the Release of Waste, Pollution, or Anything That May Impact the Environment, the

Activity	Applicable Laws
	Qualifications of Supervisors and Permanent Workers, and the Criteria for Registering Supervisors for Environmental Protection Systems, B.E. 2545 (2002), dated April 5, 2002 5.3. Ministerial Notification on the Defined Amount of Pollutants in the Air Emitted from Stacks Containing Waste or Hazardous Materials from Industrial Operations, B.E. 2545 (2002), dated October 2, 2002 5.4. Ministerial Notification on the Defined Amount of Pollutants in the Air Emitted from Factory Stacks, B.E. 2549 (2006), dated October 31, 2006 5.5. Industrial Factory Department Notification on the Submission of Data to the Continuous Emission Monitoring System (CEMS), B.E. 2550 (2007), dated October 10, 2007 5.6. Ministerial Notification on the Types and Sizes of Factories, Methods for Controlling the Release of Waste, Pollution, or Anything That May Impact the Environment, the Qualifications of Supervisors and Permanent Workers, and the Criteria for Registering Supervisors for Environmental Protection Systems (No. 2), B.E. 2554 (2011), dated January 31, 2012 5.7. Ministerial Notification on the Standards for Controlling Wastewater Discharges from Factories, B.E. 2560 (2017), dated June 7, 2017 5.8. Ministerial Regulation on the Control of Soil and Groundwater Contamination Within Factory Premises, B.E. 2559 (2016) 5.9. Ministerial Notification on the Responsibilities of Operators of Battery Recycling Factories Regarding Waste, Pollutants, and Unused Materials Disposal, dated April 27, 2001

Activity	Applicable Laws
	5.10. Ministerial Notification on Safety Protection Measures in the Operation of Battery Recycling Factories, dated April 27, 2001 5.11. Ministerial Notification on Reporting Requirements for Data from Battery Recycling Factories, dated April 27, 2001 5.12. Ministerial Notification on Defining the Amount of Pollutants in the Air Emitted from Stacks Containing Waste or Hazardous Materials from Industrial Operations, B.E. 2545 (2002), dated October 30, 2002 5.13. Ministerial Notification on the Criteria for Licensing Factory Types No. 105 and No. 106, dated November 28, 2002 5.14. Ministerial Notification on the Management of Waste or Unused Materials, B.E. 2566 (2023) 5.15. Ministerial Notification on the Management of Waste or Unused Materials (No. 2), B.E. 2566 (2023), dated August 15, 2023 5.16. Industrial Factory Department Notification on the Types or Categories of Factories Requiring Reports on the Type and Amount of Pollutants Emitted from Factories, B.E. 2553 (2010) 5.17. Ministerial Regulation No. 15 (B.E. 2544 / 2001) Issued Under the Factory Act, B.E. 2535 (1992), Requiring Factories Involved in the Sorting or Landfilling of Waste or Unused Materials to be Categorized as Factory Type No. 105 and as Factory Category 3, Regardless of Size 5.18. Ministerial Notification on the Criteria for Licensing Factory Types No. 105 and No. 106, dated November 6, 2002 5.19. Industrial Factory Department Regulation, dated November 25, 2002, on the Detailed Criteria for Licensing Factory Types No. 105 and No. 106, B.E. 2545 (2002)

Activity	Applicable Laws
	5.20. Ministry of Science, Technology, and Environment Notification on the Criteria, Methods, Procedures, and Guidelines for Preparing Environmental Impact Assessment Reports Under the National Environmental Quality Promotion and Conservation Act, B.E. 2535 (1992) 5.21. Ministerial Regulation No. 2 (B.E. 2535 / 1992) Issued Under the Factory Act, B.E. 2535 (1992) 5.22. Ministerial Notification on the Types or Categories of Factories Involved in Service Industries or Industries Providing Services to Communities, B.E. 2545 (2002) 5.23. Ministerial Notification on the Types and Sizes of Factories, Methods for Controlling the Release of Waste, Pollution, or Anything That May Impact the Environment, the Qualifications of Supervisors and Permanent Workers, and the Criteria for Registering Supervisors for Environmental Protection Systems, B.E. 2545 (2002) and Amendments (No. 2) B.E. 2554 (2011) 5.24. Industrial Factory Department Notification on Training and Examination Qualifications for Environmental Personnel in Factories, B.E. 2554 (2011) 5.25. Industrial Factory Department Notification on the Registration of Supervisors for Water Pollution Control Systems, Air Pollution Control Systems, or Industrial Waste Pollution Management Systems, B.E. 2556 (2013) 5.26. Industrial Factory Department Notification on Reporting and Notification of Environmental Personnel in Factories, B.E. 2556 (2013) 6. Hazardous Substances Act B.E. 2535 and its Amendments 7. Machine Registration Act B.E. 2514 7.1. Ministerial Regulation No. 1 and No. 2 (B.E. 2514) Issued under the Machine Registration Act B.E. 2514

Activity	Applicable Laws
	7.2. Ministerial Regulation on the Guidelines, Procedures, and Conditions for Machine Trial Runs B.E. 2553 7.3. Ministerial Regulation on Fees Related to Machine Registration B.E. 2560
9. **Sorting and material recovery from non-hazardous waste**	1. The Enhancement and Conservation of National Environment Quality Act, B.E.2535 (1992) and (No. 2) B.E. 2561 (2018) 1.1. Notification of the Ministry of Natural Resources and Environment, Establishment of controlling standards for wastewater from industrial factories, industrial estates and industrial zones, B.E. 2559 (2016). 1.2. Notification of the Ministry of Natural Resources and Environment Prescribing Standards for Controlling Air Emissions from factory 1.3. Notification of the Ministry of Natural Resources and Environment on Descriptions of Factory Types and Sizes of Industrial Factories as Pollution Sources Subject to Odor Intensity Control for Air Emissions 1.4. Notification of the Ministry of Natural Resources and Environment Prescribing Standards for Controlling Odor Intensity Emission from Pollution Sources 2. Public Health Act, B.E. 2535 (1992) 2.1. Ministerial Regulation of Public Health on the Management of Toxic or Hazardous Waste from Communities, B.E. 2563 (2020) 2.2. Ministerial Regulation of Public Health on the Joint Management of Infectious Waste Between Local Government Authorities and Other Local Government Agencies or State Agencies, B.E. 2564 (2021) 2.3. Ministerial Regulation of Public Health on the Disposal of Infectious Waste (No. 2), B.E. 2564 (2021)

Activity	Applicable Laws
	2.4. Ministerial Regulation of Public Health on Sanitary Standards for General Waste Management, B.E. 2560 (2017) 2.5. Notification of the Ministry of Public Health on Control Measures for the Transport of Infectious Waste to Prevent Illegal Dumping, B.E. 2565 (2022) 2.6. Notification of the Ministry of Public Health on Criteria for Selecting Sanitary Landfill Facilities, B.E. 2560 (2017) 2.7. Notification of the Ministry of Public Health on Characteristics and Conditions for Preventing Groundwater Contamination from Leachate, B.E. 2560 (2017) 3. Act on the Maintenance of the Cleanliness and Orderliness of the Country, B.E. 2535 (1992), and Amendment (No. 2), B.E. 2560 (2017) 4. Notification of the Ministry of Interior on Waste Management B.E. 2567 5. Town Planning Act, B.E. 2562 (2019) 6. Factory Act B.E. 2535 (1992) 6.1. Notification of the Ministry of Industry on the Requirement for Factories to Install Instruments or Special Equipment for Reporting Air Pollution from Factory Stacks, B.E. 2565 (2022), Dated April 1, 2022 6.2. Notification of the Ministry of Industry on the Specification of Pollutant Concentrations in Air Emissions from Stacks of Industrial Waste or Hazardous Materials, B.E. 2545 (2002), Dated October 2, 2002 and Amendments 6.3. Notification of the Ministry of Industry on the Amount of Contaminants in Air Discharged from Chimneys from Waste or Hazardous Materials from Industrial Operations, B.E. 2545 (2002), dated October 2, 2002

Activity	Applicable Laws
	6.4. Notification of the Ministry of Industry on the Specification of Pollutant Concentrations in Air Emissions from Factories, B.E. 2549 (2006), Dated October 31, 2006 6.5. Notification of the Ministry of Industry on Prescribing the Types and Sizes of Factories, Prescribing Methods for Controlling the Discharge of Waste, Pollution or Anything Affecting the Environment, Prescribing the Qualifications of Supervisors and On-site Operators, and Criteria for the Registration of Supervisors for Toxic Environmental Protection Systems (No. 2) B.E. 2554 (2011) Dated 31 January B.E. 2555 (2012) 6.6. Notification of the Ministry of Industry on the Specification of Standards for Controlling Wastewater Discharges from Factories, B.E. 2560 (2017), Dated June 7, 2017 6.7. Ministerial Regulation of the Ministry of Industry on the Control of Soil and Groundwater Contamination within Factory Premises, B.E. 2559 (2016) 6.8. Notification of the Ministry of Industry on the Responsibilities of Operators of Lead Battery Recycling Factories Regarding Waste Disposal, Sewage, and Hazardous Materials, Dated April 27, 2001 6.9. Notification of the Ministry of Industry on Safety Measures for Lead Battery Recycling Factories, Dated April 27, 2001 6.10. Notification of the Ministry of Industry on Reporting Requirements for Lead Battery Recycling Factories, Dated April 27, 2001 6.11. Notification of the Ministry of Industry on the Specification of Pollutant Concentrations in Air Emissions from Industrial Waste or Hazardous Materials, B.E. 2545 (2002), Dated October 30, 2002

Activity	Applicable Laws
	6.12. Notification of the Ministry of Industry on the Criteria for Approving the Types of Factories No. 105 and No. 106, Dated November 28, 2002 6.13. Notification of the Ministry of Industry on Waste and Hazardous Materials Management, B.E. 2566 (2023) 6.14. Notification of the Ministry of Industry on Waste and Hazardous Materials Management (No. 2), B.E. 2566 (2023), Dated August 15, 2023 6.15. Notification of the Department of Industrial Works on the Specification of Factory Types That Must Report the Types and Quantities of Pollutants Emitted from Factories, B.E. 2553 (2010) 6.16. Ministerial Regulation No. 15 (B.E. 2544, 2001) under the Factory Act, B.E. 2535 (1992), which Requires Factories Engaged in the Sorting or Landfilling of Waste or Hazardous Materials to be Classified as Factory No. 105, Category 3, Regardless of Size 6.17. Notification of the Ministry of Industry, Dated November 6, 2002, on the Criteria for Approving the Types of Factories No. 105 and No. 106 6.18. Regulation of the Department of Industrial Works, Dated November 25, 2002, on the Detailed Criteria for Approving the Types of Factories No. 105 and No. 106, B.E. 2545 (2002) 6.19. Notification of the Ministry of Science, Technology, and Environment on the Guidelines, Procedures, and Practices for Environmental Impact Reports, in Accordance with the National Environmental Quality Promotion and Preservation Act, B.E. 2535 (1992) 6.20. Ministerial Regulation No. 2 (B.E. 2535, 1992) under the Factory Act, B.E. 2535 (1992)

Activity	Applicable Laws
	6.21. Notification of the Ministry of Industry on the Specification of Factory Types Engaged in Service Industries or Providing Services to Communities, B.E. 2545 (2002) 6.22. Notification of the Ministry of Industry on the Specification of Factory Types and Sizes, the Methods for Controlling Waste Emissions, Pollution, or Any Harmful Environmental Impact, the Qualifications of Supervisors, and the Registration Criteria for Supervisors of Environmental Protection Systems, B.E. 2545 (2002) and Amendments 6.23. Notification of the Department of Industrial Works on the Training and Examination Qualifications of Environmental Personnel in Factories, B.E. 2554 (2011) 6.24. Notification of the Department of Industrial Works on the Registration of Supervisors for Water Pollution Treatment Systems, Air Pollution Treatment Systems, or Industrial Waste Management Systems, B.E. 2556 (2013) 6.25. Notification of the Department of Industrial Works on the Reporting and Registration of Environmental Personnel in Factories, B.E. 2556 (2013) 7. Hazardous Substances Act B.E. 2535 and its Amendments 8. Machine Registration Act B.E. 2514 8.1. Ministerial Regulation No. 1 and No. 2 (B.E. 2514) Issued under the Machine Registration Act B.E. 2514 8.2. Ministerial Regulation on the Guidelines, Procedures, and Conditions for Machine Trial Runs B.E. 2553 8.3. Ministerial Regulation on Fees Related to Machine Registration B.E. 2560
10. **Treatment of Hazardous Waste**	1. The Enhancement and Conservation of National Environment Quality Act, B.E.2535 (1992) and (No. 2) B.E. 2561 (2018) 1.1. Notification of the Ministry of Natural Resources and Environment, Establishment of controlling standards for

Activity	Applicable Laws
	wastewater from industrial factories, industrial estates and industrial zones, B.E. 2559 (2016). 1.2. Notification of the Ministry of Natural Resources and Environment Prescribing Standards for Controlling Air Emissions from factory 1.3. Notification of the Ministry of Natural Resources and Environment on Descriptions of Factory Types and Sizes of Industrial Factories as Pollution Sources Subject to Odor Intensity Control for Air Emissions 1.4. Notification of the Ministry of Natural Resources and Environment Prescribing Standards for Controlling Odor Intensity Emission from Pollution Sources 2. Public Health Act, B.E. 2535 (1992) 2.1. Ministerial Regulation of Public Health on the Management of Toxic or Hazardous Waste from Communities, B.E. 2563 (2020) 2.2. Ministerial Regulation of Public Health on the Joint Management of Infectious Waste Between Local Government Authorities and Other Local Government Agencies or State Agencies, B.E. 2564 (2021) 2.3. Ministerial Regulation of Public Health on the Disposal of Infectious Waste (No. 2), B.E. 2564 (2021) 2.4. Ministerial Regulation of Public Health on Sanitary Standards for General Waste Management, B.E. 2560 (2017) 2.5. Notification of the Ministry of Public Health on Control Measures for the Transport of Infectious Waste to Prevent Illegal Dumping, B.E. 2565 (2022) 2.6. Notification of the Ministry of Public Health on Criteria for Selecting Sanitary Landfill Facilities, B.E. 2560 (2017)

Activity	Applicable Laws
	2.7. Notification of the Ministry of Public Health on Characteristics and Conditions for Preventing Groundwater Contamination from Leachate, B.E. 2560 (2017) 3. Act on the Maintenance of the Cleanliness and Orderliness of the Country, B.E. 2535 (1992), and Amendment (No. 2), B.E. 2560 (2017) 4. Notification of the Ministry of Interior on Waste Management B.E. 2567 5. Fertiliser Act, B.E. 2518 (1975) and its Amendments 5.1. Ministerial Regulation on Fees for Fertiliser-related Business Operations, B.E. 2554 (2011) 5.2. Notification of Ministry of Agriculture and Cooperatives on Standardised Chemical Fertilisers, B.E. 2559 (2016) 5.3. Notification of Ministry of Agriculture and Cooperatives on the Required Organic Matter Content in Organic Chemical Fertilisers under the Fertiliser Act, B.E. 2518 (1975), as amended by the Fertiliser Act (No. 2), B.E. 2550 (2007), B.E. 2554 (2011) 5.4. Notification of Department of Agriculture on Criteria and Methods for Sampling Fertilisers or Suspected Fertilisers in Reasonable Quantities for Inspection or Analysis (No. 2), B.E. 2557 (2014) 5.5. Notification of Department of Agriculture on Organic Fertiliser Standards, B.E. 2557 (2014) 6. Town Planning Act, B.E. 2562 (2019) 7. Factory Act B.E. 2535 (1992) 7.1. Notification of the Ministry of Industry on the Requirement for Factories to Install Instruments or Special Equipment for Reporting Air Pollution from Factory Stacks, B.E. 2565 (2022), Dated April 1, 2022

Activity	Applicable Laws
	7.2. Notification of the Ministry of Industry on the Specification of Pollutant Concentrations in Air Emissions from Stacks of Industrial Waste or Hazardous Materials, B.E. 2545 (2002), Dated October 2, 2002 and Amendments 7.3. Notification of the Ministry of Industry on the Amount of Contaminants in Air Discharged from Chimneys from Waste or Hazardous Materials from Industrial Operations, B.E. 2545 (2002), dated October 2, 2002 7.4. Notification of the Ministry of Industry on the Specification of Pollutant Concentrations in Air Emissions from Factories, B.E. 2549 (2006), Dated October 31, 2006 7.5. Notification of the Ministry of Industry on the Specification of Standards for Controlling Wastewater Discharges from Factories, B.E. 2560 (2017), Dated June 7, 2017 7.6. Ministerial Regulation of the Ministry of Industry on the Control of Soil and Groundwater Contamination within Factory Premises, B.E. 2559 (2016) 7.7. Notification of the Ministry of Industry on the Responsibilities of Operators of Lead Battery Recycling Factories Regarding Waste Disposal, Sewage, and Hazardous Materials, Dated April 27, 2001 7.8. Notification of the Ministry of Industry on Safety Measures for Lead Battery Recycling Factories, Dated April 27, 2001 7.9. Notification of the Ministry of Industry on Reporting Requirements for Lead Battery Recycling Factories, Dated April 27, 2001 7.10. Notification of the Ministry of Industry on the Specification of Pollutant Concentrations in Air Emissions from Industrial Waste or Hazardous Materials, B.E. 2545 (2002), Dated October 30, 2002

Activity	Applicable Laws
	7.11. Notification of the Ministry of Industry on the Criteria for Approving the Types of Factories No. 105 and No. 106, Dated November 28, 2002 7.12. Notification of the Ministry of Industry on Waste and Hazardous Materials Management, B.E. 2566 (2023) 7.13. Notification of the Ministry of Industry on Waste and Hazardous Materials Management (No. 2), B.E. 2566 (2023), Dated August 15, 2023 7.14. Notification of the Department of Industrial Works on the Specification of Factory Types That Must Report the Types and Quantities of Pollutants Emitted from Factories, B.E. 2553 (2010) 7.15. Ministerial Regulation No. 15 (B.E. 2544, 2001) under the Factory Act, B.E. 2535 (1992), which Requires Factories Engaged in the Sorting or Landfilling of Waste or Hazardous Materials to be Classified as Factory No. 105, Category 3, Regardless of Size 7.16. Notification of the Ministry of Industry, Dated November 6, 2002, on the Criteria for Approving the Types of Factories No. 105 and No. 106 7.17. Regulation of the Department of Industrial Works, Dated November 25, 2002, on the Detailed Criteria for Approving the Types of Factories No. 105 and No. 106, B.E. 2545 (2002) 7.18. Notification of the Ministry of Science, Technology, and Environment on the Guidelines, Procedures, and Practices for Environmental Impact Reports, in Accordance with the National Environmental Quality Promotion and Preservation Act, B.E. 2535 (1992) 7.19. Ministerial Regulation No. 2 (B.E. 2535, 1992) under the Factory Act, B.E. 2535 (1992)

Activity	Applicable Laws
	7.20. Notification of the Ministry of Industry on the Specification of Factory Types Engaged in Service Industries or Providing Services to Communities, B.E. 2545 (2002) 7.21. Notification of the Ministry of Industry on the Specification of Factory Types and Sizes, the Methods for Controlling Waste Emissions, Pollution, or Any Harmful Environmental Impact, the Qualifications of Supervisors, and the Registration Criteria for Supervisors of Environmental Protection Systems, B.E. 2545 (2002) and Amendments 7.22. Notification of the Department of Industrial Works on the Training and Examination Qualifications of Environmental Personnel in Factories, B.E. 2554 (2011) 7.23. Notification of the Department of Industrial Works on the Registration of Supervisors for Water Pollution Treatment Systems, Air Pollution Treatment Systems, or Industrial Waste Management Systems, B.E. 2556 (2013) 7.24. Notification of the Department of Industrial Works on the Reporting and Registration of Environmental Personnel in Factories, B.E. 2556 (2013) 8. Hazardous Substances Act B.E. 2535 and its Amendments 9. Machine Registration Act B.E. 2514 9.1. Ministerial Regulation No. 1 and No. 2 (B.E. 2514) Issued under the Machine Registration Act B.E. 2514 9.2. Ministerial Regulation on the Guidelines, Procedures, and Conditions for Machine Trial Runs B.E. 2553 9.3. Ministerial Regulation Prescribing Fees related to Machinery Registration B.E. 2560
11. **Construction, extension, upgrade, operation and renewal of**	1. The Enhancement and Conservation of National Environment Quality Act, B.E.2535 (1992) and (No. 2) B.E. 2561 (2018) 1.1. Notification of the Ministry of Natural Resources and Environment, Establishment of controlling standards for

Activity	Applicable Laws
decentralised wastewater collection and treatment	wastewater from industrial factories, industrial estates and industrial zones, B.E. 2559 (2016). 1.2. Notification of the Ministry of Natural Resources and Environment Prescribing Standards for Controlling Air Emissions from factory 1.3. Notification of the Ministry of Natural Resources and Environment on Descriptions of Factory Types and Sizes of Industrial Factories as Pollution Sources Subject to Odor Intensity Control for Air Emissions 1.4. Notification of the Ministry of Natural Resources and Environment Prescribing Standards for Controlling Odor Intensity Emission from Pollution Sources 2. Public Health Act, B.E. 2535 (1992) 2.1. Notification of the Ministry of Public Health on Activities Hazardous to Health, B.E. 2558 (2015) 2.2. Ministerial Regulation of the Ministry of Public Health on the Joint Management of Infectious Waste Between Local Governments and Other Government Agencies, B.E. 2564 (2021) 2.3. Ministerial Regulation of the Ministry of Public Health on the Disposal of Infectious Waste (No. 2), B.E. 2564 (2021) 2.4. Ministerial Regulation of the Ministry of Public Health on Sanitation in General Waste Management, B.E. 2560 (2017) 2.5. Notification of the Ministry of Public Health on Measures to Control the Transportation of Infectious Waste to Prevent Illegal Dumping of Infectious Waste, B.E. 2565 (2022) 3. Act on the Maintenance of the Cleanliness and Orderliness of the Country, B.E. 2535 (1992), and Amendment (No. 2), B.E. 2560 (2017) 4. Fertiliser Act, B.E. 2518 (1975) and its Amendments

Activity	Applicable Laws
	4.1. Ministerial Regulation on Fees for Fertiliser-related Business Operations, B.E. 2554 (2011) 4.2. Notification of Ministry of Agriculture and Cooperatives on Standardised Chemical Fertilisers, B.E. 2559 (2016) 4.3. Notification of Ministry of Agriculture and Cooperatives on the Required Organic Matter Content in Organic Chemical Fertilisers under the Fertiliser Act, B.E. 2518 (1975), as amended by the Fertiliser Act (No. 2), B.E. 2550 (2007), B.E. 2554 (2011) 4.4. Notification of Department of Agriculture on Criteria and Methods for Sampling Fertilisers or Suspected Fertilisers in Reasonable Quantities for Inspection or Analysis (No. 2), B.E. 2557 (2014) 4.5. Notification of Department of Agriculture on Organic Fertiliser Standards, B.E. 2557 (201 5. Town Planning Act, B.E. 2562 (2019) 6. Factory Act, B.E. 2535 (1992) 6.1. Notification of the Ministry of Industry on the Requirement for Factories to Install Equipment or Special Devices to Report Air Pollution from Factory Chimneys, B.E. 2565 (2022), dated April 1, 2022 6.2. Notification of the Ministry of Industry on the Types and Sizes of Factories, Methods for Controlling Waste and Pollution Discharge, and Qualifications for Supervisors and Operators for Environmental Protection Systems, B.E. 2545 (2002), dated April 5, 2002 6.3. Notification of the Ministry of Industry on the Amount of Contaminants in Air Discharged from Chimneys from Waste or Hazardous Materials from Industrial Operations, B.E. 2545 (2002), dated October 2, 2002

Activity	Applicable Laws
	6.4. Notification of the Ministry of Industry on the Amount of Contaminants in Air Discharged from Factories, B.E. 2549 (2006), dated October 31, 2006 6.5. Notification of the Ministry of Industry on the Types and Sizes of Factories, Methods for Controlling Waste and Pollution Discharge, and Qualifications for Supervisors and Operators for Environmental Protection Systems (No. 2), B.E. 2554 (2011), dated January 31, 2012 6.6. Notification of the Ministry of Industry on Standards for Controlling the Discharge of Wastewater from Factories, B.E. 2560 (2017), dated June 7, 2017 6.7. Ministerial Regulation of the Ministry of Industry on the Control of Soil and Groundwater Contamination within Factory Areas, B.E. 2559 (2016) 6.8. Notification of the Ministry of Industry on the Management of Waste and Materials That Are No Longer Used, B.E. 2566 (2023) 6.9. Notification of the Ministry of Industry on the Management of Waste and Materials That Are No Longer Used (No. 2), B.E. 2566 (2023), dated August 15, 2023 6.10. Notification of the Department of Industrial Works on the Types and Sizes of Factories Required to Report the Types and Quantities of Pollutants Discharged from Factories, B.E. 2553 (2010) 6.11. Notification of the Ministry of Science, Technology, and Environment on the Guidelines, Procedures, Regulations, and Directions for Preparing Environmental Impact Assessment Reports According to the National Environmental Quality Promotion and Conservation Act, B.E. 2535 (1992)

Activity	Applicable Laws
	6.12. Ministerial Regulation No. 2, B.E. 2535 (1992), issued under the Factory Act, B.E. 2535 (1992) 6.13. Notification of the Ministry of Industry on the Types and Sizes of Factories Engaged in Service Industries or Providing Services to the Community, B.E. 2545 (2002) 6.14. Notification of the Ministry of Industry on the Types and Sizes of Factories, Methods for Controlling Waste and Pollution Discharge, and Qualifications for Supervisors and Operators for Environmental Protection Systems, B.E. 2545 (2002) and Amendment No. 2, B.E. 2554 (2011) 6.15. Notification of the Department of Industrial Works on the Qualifications for Training and Examination of Environmental Personnel in Factories, B.E. 2554 (2011) 6.16. Notification of the Department of Industrial Works on the Registration of Personnel for Managing Water Pollution Treatment Systems, Air Pollution Treatment Systems, or Industrial Waste Pollution Management Systems, B.E. 2556 (2013) 6.17. Notification of the Department of Industrial Works on Reporting and Acknowledgment of Environmental Personnel in Factories, B.E. 2556 (2013) 7. Hazardous Substances Act B.E. 2535 and its Amendments 8. Machine Registration Act B.E. 2514 8.1. Ministerial Regulation No. 1 and No. 2 (B.E. 2514) Issued under the Machine Registration Act B.E. 2514 8.2. Ministerial Regulation on the Guidelines, Procedures, and Conditions for Machine Trial Runs B.E. 2553 8.3. Ministerial Regulation on Fees Related to Machine Registration B.E. 2560
12. **Construction, extension, upgrade,**	1. The Enhancement and Conservation of National Environment Quality Act, B.E.2535 (1992) and (No. 2) B.E. 2561 (2018)

Activity	Applicable Laws
and operation of centralised wastewater collection and treatment	1.1. Notification of the Ministry of Natural Resources and Environment, Establishment of controlling standards for wastewater from industrial factories, industrial estates and industrial zones, B.E. 2559 (2016). 1.2. Notification of the Ministry of Natural Resources and Environment Prescribing Standards for Controlling Air Emissions from factory 1.3. Notification of the Ministry of Natural Resources and Environment on Descriptions of Factory Types and Sizes of Industrial Factories as Pollution Sources Subject to Odor Intensity Control for Air Emissions 1.4. Notification of the Ministry of Natural Resources and Environment Prescribing Standards for Controlling Odor Intensity Emission from Pollution Sources 2. Public Health Act, B.E. 2535 (1992) 2.1. Notification of the Ministry of Public Health on Activities Hazardous to Health, B.E. 2558 (2015) 2.2. Ministerial Regulation of the Ministry of Public Health on the Joint Management of Infectious Waste Between Local Governments and Other Government Agencies, B.E. 2564 (2021) 2.3. Ministerial Regulation of the Ministry of Public Health on the Disposal of Infectious Waste (No. 2), B.E. 2564 (2021) 2.4. Ministerial Regulation of the Ministry of Public Health on Sanitation in General Waste Management, B.E. 2560 (2017) 2.5. Notification of the Ministry of Public Health on Measures to Control the Transportation of Infectious Waste to Prevent Illegal Dumping of Infectious Waste, B.E. 2565 (2022) 3. Act on the Maintenance of the Cleanliness and Orderliness of the Country, B.E. 2535 (1992), and Amendment (No. 2), B.E. 2560 (2017)

Activity	Applicable Laws
	4. Fertiliser Act, B.E. 2518 (1975) and its Amendments 4.1. Ministerial Regulation on Fees for Fertiliser-related Business Operations, B.E. 2554 (2011) 4.2. Notification of Ministry of Agriculture and Cooperatives on Standardised Chemical Fertilisers, B.E. 2559 (2016) 4.3. Notification of Ministry of Agriculture and Cooperatives on the Required Organic Matter Content in Organic Chemical Fertilisers under the Fertiliser Act, B.E. 2518 (1975), as amended by the Fertiliser Act (No. 2), B.E. 2550 (2007), B.E. 2554 (2011) 4.4. Notification of Department of Agriculture on Criteria and Methods for Sampling Fertilisers or Suspected Fertilisers in Reasonable Quantities for Inspection or Analysis (No. 2), B.E. 2557 (2014) 4.5. Notification of Department of Agriculture on Organic Fertiliser Standards, B.E. 2557 (2014) 5. Town Planning Act, B.E. 2562 (2019) 6. Factory Act, B.E. 2535 (1992) 6.1. Notification of the Ministry of Industry on the Requirement for Factories to Install Equipment or Special Devices to Report Air Pollution from Factory Chimneys, B.E. 2565 (2022), dated April 1, 2022 6.2. Notification of the Ministry of Industry on the Types and Sizes of Factories, Methods for Controlling Waste, Pollution, or Any Environmental Impact, and the Qualifications of Supervisors and Operators, as well as the Registration Criteria for Supervisors of Environmental Protection Systems, B.E. 2545 (2002), dated April 5, 2002 6.3. Notification of the Ministry of Industry on the Amount of Contaminants in Air Discharged from Chimneys from Waste

Activity	Applicable Laws
	or Hazardous Materials in Industrial Operations, B.E. 2545(2002), dated October 2, 2002 6.4. Notification of the Ministry of Industry on the Amount of Contaminants in Air Discharged from Factories, B.E. 2549 (2006), dated October 31, 2006 6.5. Notification of the Ministry of Industry on the Types and Sizes of Factories, Methods for Controlling Waste, Pollution, or Any Environmental Impact, and the Qualifications of Supervisors and Operators, as well as the Registration Criteria for Supervisors of Environmental Protection Systems (No. 2), B.E. 2554 (2011), dated January 31, 2012 6.6. Notification of the Ministry of Industry on the Standards for Controlling the Discharge of Wastewater from Factories, B.E. 2560 (2017), dated June 7, 2017 6.7. Ministerial Regulation of the Ministry of Industry on the Control of Soil and Groundwater Contamination within Factory Areas, B.E. 2559 (2016) 6.8. Notification of the Ministry of Industry on the Management of Waste and Materials That Are No Longer Used, B.E. 2566 (2023) 6.9. Notification of the Ministry of Industry on the Management of Waste and Materials That Are No Longer Used (No. 2), B.E. 2566 (2023), dated August 15, 2023 6.10. Notification of the Department of Industrial Works on the Types and Sizes of Factories Required to Report the Types and Quantities of Pollutants Discharged from Factories, B.E. 2553 (2010) 6.11. Notification of the Ministry of Science, Technology, and Environment on the Guidelines, Procedures, Regulations, and Directions for Preparing Environmental Impact Assessment Reports According to the National

Activity	Applicable Laws
	Environmental Quality Promotion and Conservation Act, B.E. 2535 (1992) 6.12. Ministerial Regulation No. 2, B.E. 2535 (1992), issued under the Factory Act, B.E. 2535 (1992) 6.13. Notification of the Ministry of Industry on the Types and Sizes of Factories Engaged in Service Industries or Providing Services to the Community, B.E. 2545 (2002) 6.14. Notification of the Ministry of Industry on the Types and Sizes of Factories, Methods for Controlling Waste, Pollution, or Any Environmental Impact, and the Qualifications of Supervisors and Operators, as well as the Registration Criteria for Supervisors of Environmental Protection Systems, B.E. 2545 (2002) and Amendment No. 2, B.E. 2554 (2011) 6.15. Notification of the Department of Industrial Works on the Qualifications for Training and Examination of Environmental Personnel in Factories, B.E. 2554 (2011) 6.16. Notification of the Department of Industrial Works on the Registration of Personnel for Managing Water Pollution Treatment Systems, Air Pollution Treatment Systems, or Industrial Waste Pollution Management Systems, B.E. 2556 (2013) 6.17. Notification of the Department of Industrial Works on Reporting and Acknowledgment of Environmental Personnel in Factories, B.E. 2556 (2013) 7. Hazardous Substances Act B.E. 2535 and its Amendments 8. Machine Registration Act B.E. 2514 8.1. Ministerial Regulation No. 1 and No. 2 (B.E. 2514) Issued under the Machine Registration Act B.E. 2514 8.2. Ministerial Regulation on the Guidelines, Procedures, and Conditions for Machine Trial Runs B.E. 2553

Activity	Applicable Laws
	8.3. Ministerial Regulation on Fees Related to Machine Registration B.E. 2560
13. **Renewal of centralised wastewater collection and treatment**	Similar to the activity above

Annex III Thailand Taxonomy Waste Management Activities – interoperability with other Taxonomies

A summary of the list of EU Taxonomy economic activities, which have been adjusted to Thai context, is provided below.

Comparison of EUT and SGT Activities with proposed Thailand Taxonomy Activities[13]

ISIC	European Union (EU) Taxonomy	Singapore Taxonomy (SGT)[14]	Thailand Taxonomy
3821	*Anaerobic digestion of bio-waste* https://ec.europa.eu/sustainable-finance-taxonomy/activities/activity/324/view *(EO1, EO2)*	8.3 Biowaste treatment: anaerobic digestion (EO1)	Adopted as '1. Anaerobic digestion of bio-waste or wastewater' (EO1). Energy recovery contributes to EO1 due to methane avoided from landfill diversion.
370	*Anaerobic digestion of sewage sludge* https://ec.europa.eu/sustainable-finance-taxonomy/activities/activity/323/view *(EO1, EO2)*		Merged into to '1. Anaerobic digestion of bio-waste or wastewater' (EO1). Energy recovery contributes to EO1 due to methane avoided from landfill diversion.
3821	*Composting of bio-waste* https://ec.europa.eu/sustainable-finance-taxonomy/activities/activity/325/view *(EO1, EO2)*	8.2 Biowaste treatment: composting of biowaste (EO1)	Adopted as 2. Composting of bio-waste (EO4)
3821	*Recovery of bio-waste by anaerobic digestion or composting* https://ec.europa.eu/sustainable-finance-taxonomy/activities/activity/393/view *(EO4)*	n/a	Split into '1 Anaerobic digestion of bio-waste or wastewater' (EO4) and '2 Composting of bio-waste' (EO4) for consistency in activity categorization.

[13] Environmental Objectives (EO) codes have the meaning defined in the Thailand Taxonomy.

[14] As of the date of this document, SGT only includes EO1 activities.

ISIC	European Union (EU) Taxonomy	Singapore Taxonomy (SGT)[14]	Thailand Taxonomy
3812	*Collection and transport of hazardous waste* *https://ec.europa.eu/sustainable-finance-taxonomy/activities/activity/408/view (EO5)*	n/a	Merged to '3 Collection and transport of waste' (EO4, EO5) due to similarity of activities
3811, 3812	*Collection and transport of non-hazardous and hazardous waste* *https://ec.europa.eu/sustainable-finance-taxonomy/activities/activity/391/view (EO4)*	n/a	
3811, 3812	*(Demolition Waste Collection and Transport included within EUT Construction & Real Estate Sector)* *https://ec.europa.eu/sustainable-finance-taxonomy/activities/activity/396/view (EO4)*	n/a	
3811	*Collection and transport of non-hazardous waste in source segregated fractions* *https://ec.europa.eu/sustainable-finance-taxonomy/activities/activity/322/view (EO1, EO2)*	8.1 Collection and transport of non-hazardous waste (EO1)	
383	*Depollution and dismantling of end-of-life products* *https://ec.europa.eu/sustainable-finance-taxonomy/activities/activity/394/view (EO4)*	n/a	Adopted as '4. Depollution and dismantling of end-of-life products' (EO4)

ISIC	European Union (EU) Taxonomy	Singapore Taxonomy (SGT)[14]	Thailand Taxonomy
3821, 3822	*(Not recognised by EUT)*	8.4. Waste to Energy (Incineration) (EO1)	(NEW) '5. Waste to Energy' (EO1) added due to economic and environmental importance
3821	*Landfill gas capture and utilisation https://ec.europa.eu/sustainable-finance-taxonomy/activities/activity/327/view (EO1, EO2)*	8.5. Landfill gas capture and utilisation (EO1)	Adopted as '6. Landfill gas capture and utilisation' (EO1)
390, 3320, 431, 711	*Remediation of contaminated sites and areas https://ec.europa.eu/sustainable-finance-taxonomy/activities/activity/410/view (EO5)*	n/a	Adopted as '7. Remediation of contaminated sites and areas' (EO5)
390, 382, 3830	*Remediation of legally non-conforming landfills and abandoned or illegal waste dumps https://ec.europa.eu/sustainable-finance-taxonomy/activities/activity/409/view (EO5)*	n/a	Adopted as '8. Remediation of legally non-conforming landfills and abandoned or illegal waste dumps' (EO5)
3830	*Material recovery from non-hazardous waste https://ec.europa.eu/sustainable-finance-taxonomy/activities/activity/326/view (EO1, EO2)*	8.6 Material recovery facilities	Merged to '9. Sorting and material recovery from non-hazardous waste' (EO4) due to similarity of activities

ISIC	European Union (EU) Taxonomy	Singapore Taxonomy (SGT)[14]	Thailand Taxonomy
3830	*Sorting and material recovery of non-hazardous waste* *https://ec.europa.eu/sustainable-finance-taxonomy/activities/activity/395/view (EO4)*	n/a	
3822	*Treatment of hazardous waste* *https://ec.europa.eu/sustainable-finance-taxonomy/activities/activity/392/view (EO4, EO5)*	n/a	Adopted as '10. Treatment of hazardous waste' (EO4, EO5)
3700	*Urban Wastewater Treatment* *https://ec.europa.eu/sustainable-finance-taxonomy/activities/activity/383/view (EO3)*	n/a	Adapted to '11. Construction, extension, upgrade, operation and renewal of decentralised wastewater collection and treatment' (EO2, EO3) to meet the local context of wastewater infrastructure
3700	*Production of alternative water resources for purposes other than human consumption* *https://ec.europa.eu/sustainable-finance-taxonomy/activities/activity/390/view (EO4)*	n/a	Production of alternative water from wastewater was adapted to '11. Construction, extension, upgrade, operation and renewal of decentralised wastewater collection and treatment' (EO4). The rest of the scope (rain and storm water harvest) is set aside for 'Water' Working Group

ISIC	European Union (EU) Taxonomy	Singapore Taxonomy (SGT)[14]	Thailand Taxonomy
3700	*Construction, extension and operation of wastewater collection and treatment* https://ec.europa.eu/sustainable-finance-taxonomy/activities/activity/320/view *(EO1, EO2)*	9.6. Construction, extension and operation of wastewater collection and treatment (EO1)	Adapted to '12. Construction, extension, upgrade, and operation of centralised wastewater collection and treatment' (EO1, EO2) to meet the local context of wastewater infrastructure
3700	*Renewal of wastewater collection and treatment* https://ec.europa.eu/sustainable-finance-taxonomy/activities/activity/321/view *(EO1, EO2)*	9.7. Renewal of wastewater collection and treatment (EO1)	Adapted to '13. Renewal of centralised wastewater collection and treatment' (EO1, EO2) to meet the local context of wastewater infrastructure
3600	*Water supply* https://ec.europa.eu/sustainable-finance-taxonomy/activities/activity/382/view *(EO3)*	n/a	Set aside for 'Water' Working Group
3600	*Construction, extension and operation of water collection, treatment and supply systems.* https://ec.europa.eu/sustainable-finance-taxonomy/activities/activity/318/view *(EO1, EO2)*	9.1. Construction, extension and operation of new water collection and treatment systems (abstraction and treatment systems) (EO1)	Set aside for 'Water' Working Group
3600	*Desalination* https://ec.europa.eu/sustainable-finance-taxonomy/activities/activity/363/view *(EO2)*	9.5. Desalination Systems (EO1)	Excluded due to irrelevance to the context of Thailand
3600	*Renewal of water collection, treatment and supply systems* https://ec.europa.eu/sustain	9.3 Renewal of water collection, treatment and supply systems (abstraction and treatment systems) (EO1)	Set aside for 'Water' Working Group

ISIC	European Union (EU) Taxonomy	Singapore Taxonomy (SGT)[14]	Thailand Taxonomy
	able-finance-taxonomy/activities/activity/319/view (EO1, EO2)	9.4 Renewal of water collection, treatment and supply systems (distribution networks) (EO1)	
3600, 3700	*Sustainable urban drainage systems https://ec.europa.eu/sustainable-finance-taxonomy/activities/activity/384/view (EO3)*	n/a	Set aside for 'Water' Working Group
3830, 3700	*Phosphorus recovery from wastewater https://ec.europa.eu/sustainable-finance-taxonomy/activities/activity/389/view (EO4)*	n/a	Excluded due to irrelevance to the context of Thailand
390	*Underground permanent geological storage of CO2 https://ec.europa.eu/sustainable-finance-taxonomy/activities/activity/329/view (EO1, EO2)*	n/a	Excluded due to irrelevance to the context of Thailand
422	*Transport of CO2 https://ec.europa.eu/sustainable-finance-taxonomy/activities/activity/328/view (EO1, EO2)*	n/a	Excluded due to irrelevance to the context of Thailand

References

Ashijya Otwong, S. J. (2021). Legal obstacles for the circular economy in Thailand: Illegal dumping of recyclable hazardous industrial waste. *Journal of Clearner Production, 302*. Retrieved from https://www.sciencedirect.com/science/article/abs/pii/S0959652621011884

CBI. (2022, August). *Waste Management Criteria.* Retrieved from Climate Bonds Initiative: https://www.climatebonds.net/standard/waste

DLT. (2024). *Land Transportation Statistics 2019-2023.* Retrieved from Department of Land Transport: https://web.dlt.go.th/statistics/

EPPO. (2016, March 28). *Thailand Power Development Plan.* Retrieved from Energy Policy and Planning Office, Ministry of Energy: https://www.eppo.go.th/index.php/en/policy-and-plan/en-tieb/tieb-pdp

EU. (2024, March 14). *Supply, sewerage, waste management and remediation*. Retrieved from EU Taxonomy Navigator: https://ec.europa.eu/sustainable-finance-taxonomy/sectors/sector/5/view

IPCC. (2021, August). *AR6 WG1 Report - List of corrigenda to be implemented.* Retrieved April 20, 2024, from IPCC: https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Chapter_07_Supplementary_Material.pdf

IQAir. (2020, July 10). *The real cost of air pollution*. Retrieved from IQAir: https://www.iqair.com/th-en/newsroom/cost-of-air-pollution

IQAir. (2024, April 30). *Air quality in Thailand*. Retrieved from IQAir: https://www.iqair.com/thailand

Khaosod. (2022, February 5). *ปทส.เปิดปฏิบัติการ "SHUT DOWN! บ่อขยะเถื่อนทั่วกรุง" ผงะเจอทำมา 7 ปี... อ่านข่าวต้นฉบับได้ที่ : https://www.khaosod.co.th/crime/news_6873279*. Retrieved from Khaosod: https://www.khaosod.co.th/crime/news_6873279

Kittithammavong, V., Khanitchaidecha, W., & Thongsanit, P. (2023). CO2 Emissions from Plastic Consumption Behaviors in Thailand. *Sustainability 15(16):12135*, 15. Retrieved from https://www.researchgate.net/publication/373002072_CO2_Emissions_from_Plastic_Consumption_Behaviors_in_Thailand

Makavou, K. (2021, May 26). *The EU is clear: Waste-to-Energy incineration has no place in the sustainability agenda.* Retrieved from Zero Waste Europe: https://zerowasteeurope.eu/2021/05/wte-incineration-no-place-sustainability-agenda/

MAS. (2023, December 03). *MAS Launches World's First Multi-Sector Transition Taxonomy*. Retrieved from Monetary Authority of Singapore: https://www.mas.gov.sg/news/media-releases/2023/mas-launches-worlds-first-multi-sector-transition-taxonomy

MONRE. (2022, November). *Long-Term Low GHG Development Strategy (Revised).* Retrieved from UNFCCC: https://unfccc.int/documents/622276

MONRE. (2024, December 26). *Thailand. 2024 Biennial Transparency Report (BTR). BTR1.* Retrieved from UNFCCC: https://unfccc.int/documents/645098

Otwong, A., Jongmeewasin, S., & Phenrat, T. (2021). Legal obstacles for the circular economy in Thailand: Illegal dumping of recyclable hazardous industrial waste. *Journal of Cleaner Production, 302*. Retrieved from https://www.sciencedirect.com/science/article/abs/pii/S0959652621011884

PCD. (2017). *Domestic Wastewater Guidance.* Retrieved from https://www.pcd.go.th/publication/4241/

PCD. (2021, July 19). *WEE Integrated Action Plan 2022-2026 Draft.* Retrieved from PCD: https://www.pcd.go.th/wp-content/uploads/2021/07/pcdnew-2021-07-19_06-41-36_736367.pdf

PCD. (2022a, n/a n/a). *คู่มือปฏิบัติการในการป้องกันและแก้ไขปัญหาฝุ่นละออง PM 2.5 ระดับจังหวัด.* Retrieved from PCD: http://air4thai.com/tagoV2/tago_file/books/book_file/a2af0da186e2165546c0d9a845a19d5c.pdf

PCD. (2022b, August 06). *PRESS: Ministry of Natural Resources and Environment, Pollution Control Department.* Retrieved from PCD: https://www.pcd.go.th/wp-content/uploads/2022/08/pcdnew-2022-08-29_03-50-13_431030.pdf

PCD. (2023, December). *Waste Water Treatment Target Manual 2018 - 2037.* Retrieved from PCD: https://www.pcd.go.th/waters/%e0%b8%84%e0%b8%b9%e0%b9%88%e0%b8%a1%e0%b8%b7%e0%b8%ad%e0%b8%9e%e0%b8%b7%e0%b9%89%e0%b8%99%e0%b8%97%e0%b8%b5%e0%b9%88%e0%b9%80%e0%b8%9b%e0%b9%89%e0%b8%b2%e0%b8%ab%e0%b8%a1%e0%b8%b2%e0%b8%a2%e0%b9%83%e0%b8%99%e0%b8%81%e0%b8%b2%

PCD. (2023a, January 27). *Action Plan on Plastic Waste Management Phase II (2023-2027).* Retrieved from Pollution Control Department: https://www.pcd.go.th/publication/28484

PCD. (2023b, February 16). *National Waste Management Master Plan 2022 - 2027.* Retrieved from Pollution Control Department: https://www.pcd.go.th/publication/28745

PCD. (2023c, February 17). *The national GHG Reduction Action Plan 2021-2030 for the Waste Management Sector.* Retrieved from MONRE: https://hub.mnre.go.th/th/knowledge/detail/63133

PCD. (2023d, May 12). *2022 Municipal Hazardous Waste Situation Report.* Retrieved from PCD: https://www.pcd.go.th/publication/29745

PCD. (2024a, January). *2023 - 2030 Food Waste Management Roadmap and Phase 1 Food Waste Management Implementation Plan.* Retrieved from MNRE: https://hub.mnre.go.th/th/knowledge/detail/65633

PCD. (2024b, June). *Thailand State of Pollution Report 2023.* Retrieved from PCD: https://www.pcd.go.th/publication/32171/

PCD. (2025, March 12). *DSPOT.* Retrieved from PCD 02-231 Book2/3 Community Wastewater and Sludge Utilization Measures and Strategies: https://dspot.pcd.go.th/statistics/publish_document

Rujivanarom, P. (2023, April 2). *Waste plants cause stink*. Retrieved from Bangkok Post: https://www.bangkokpost.com/thailand/general/2541294/waste-plants-cause-stink

TEI. (2022, January). *Management and Reduction of Burning Practice in Agricultural Areas and Policy Recommendations to tackle PM 2.5 in Thailand.* Retrieved from TEI: https://www.tei.or.th/file/library/2022-ABM-ENG_76.pdf

Wachpanich, N., & Coca, N. (2022, December 8). *As waste-to-energy incinerators spread in Southeast Asia, so do concerns*. Retrieved from Mongabay: https://news.mongabay.com/2022/12/as-waste-to-energy-incinerators-spread-in-southeast-asia-so-do-concerns/

World Bank Group. (2021, February 10). *Market Study for Thailand: Plastics Circularity Opportunities and Barriers.* Retrieved from World Bank Group: https://www.worldbank.org/en/country/thailand/publication/market-study-for-thailand-plastics-circularity-opportunities-and-barriers