

ESG and Green Management in Thailand

Heylim Cho

Department of International Relations, Ritsumeikan University, Kyoto, Japan

Email: ir0408ie@ed.ritsumei.ac.jp

How to cite this paper: Cho, H. (2023).
ESG and Green Management in Thailand.
Voice of the Publisher, 9, 295-313.
<https://doi.org/10.4236/vp.2023.94023>

Received: September 21, 2023

Accepted: December 16, 2023

Published: December 19, 2023

Copyright © 2023 by author(s) and
Scientific Research Publishing Inc.
This work is licensed under the Creative
Commons Attribution International
License (CC BY 4.0).
<http://creativecommons.org/licenses/by/4.0/>



Open Access

Abstract

As ESG concepts and green management became a global trend, climate change was no longer an environmental issue but a corporate management factor. Various companies are actively participating in ESG management to increase international agreements on climate change, strengthen regulations, and value preference of eco-friendly products by consumers, and secure a competitive advantage over other companies. In the case of Thailand, a small number of large companies are leading ESG, but the quality is very high and it is expected to set a precedent for Southeast Asia. ESG will determine the corporate value and development potential in the future as companies that have been slow to change now accept these changes quickly and value future sustainability. This study evaluates Thailand's ESG performance by examining Thai domestic companies included in globally recognized ESG indices such as the Dow Jones Sustainability Indices (DJSI), Morgan Stanley Capital International (MSCI), and the Thailand Sustainability Investment Index (THSI).

Keywords

ESG, Green Management, Thailand, Southeast Asia, Sustainable Development

1. Introduction

In our rapidly changing global landscape, the repercussions of rising temperatures, a direct consequence of the pervasive issue of global warming and the increasing occurrence of abnormal weather events, are being keenly felt by nations and individuals alike. The urgency to mitigate this phenomenon has spurred a worldwide effort to curb greenhouse gas emissions, widely recognized as the primary culprits behind global warming and climate change. Concurrently, there has been a notable surge in national and corporate interests regarding Environmental Social Governance (ESG) management on a global scale. This burgeoning trend has permeated discussions on national policies, corporate management

philosophies, and investment guidelines, all underscored by a deep-rooted connection to the Sustainable Development Goals (SDGs). The underlying ethos of ESG seeks to transcend the boundaries of shareholder capitalism, which has traditionally focused solely on economic and industrial development (Samans & Nelson, 2022). ESG also serves as a critical tool for assessing and quantifying an organization's impact on environmental sustainability and social standards, thereby evaluating the sustainability and ethical implications of investing in a business or company.

While Southeast Asian countries historically exhibited a lower overall interest in environmental concerns, including ESG and Green Management, in comparison to EU countries with their stringent environmental regulations and declarations of carbon neutrality, recent times have witnessed the spread of ESG and green management practices throughout Southeast Asia. This transformation is driven by the increasing enthusiasm of governments and companies in the region, aligning themselves with the global ESG trend. Notably, Thailand has emerged as a leader in sustainable management within Southeast Asia, with a sustained commitment to ESG principles and major sustainability policies extending over several years (Kokubu & Nagasaki, 2020). Although Thai companies may not be as proactive as their global counterparts in implementing ESG measures, their high level of compliance indicates promising prospects for future development. The proactive adoption of ESG principles by Thai companies, regulators, and stakeholders aligns seamlessly with the global momentum surrounding ESG and the accompanying regulatory framework. The Stock Exchange of Thailand (SET) has been at the forefront of supporting sustainable business practices among Thai companies through initiatives such as the Thailand Sustainability Investment (THSI) list. This forward-looking list is designed to propel technological advancements aimed at reducing carbon emissions and addressing labor-related issues. The SET actively encourages and facilitates sustainable development management among Thai companies. Importantly, this proactive stance extends beyond listed corporations. Small and medium-sized enterprises (SMEs), both listed and unlisted, have voluntarily embarked on a journey to assess their environmental practices, implement robust governance policies, and proactively disclose comprehensive Sustainable Development Reports. Their active engagement in this process, along with their commitment to documenting and transparently sharing their efforts, is narrowing the gap that has traditionally existed between listed and unlisted companies. Entrepreneurs in Thailand are actively addressing these shortcomings, fostering a positive trend that holds the potential to benefit not only Thailand but also the broader ASEAN region. This collective effort underscores Thailand's promising trajectory toward sustainable development in the context of ESG principles and serves as an encouraging sign for the region's future prospects. Consequently, this research endeavors to provide a comprehensive analysis of the current status of ESG business models and green management practices in Thailand and aims to shed light

on how Thailand can set a benchmark for Southeast Asia by addressing existing deficiencies and fostering a path toward sustainable progress.

2. Literature Review

ESG and Green Management

ESGs are a set of standards that measure the overall impact of a company on its social aspects, environmental factors, and how much it values transparency in governance (Barker & Chiu, 2017). It also refers to the three key factors in measuring the sustainability and ethical impact of an investment in a business or company. Specifically, environmental factors include the reduction of CO₂ emissions, biodiversity protection, energy consumption reduction, and chemical substance management (Hill, 2020). This focus suggests that economic growth and technological advances no longer solely determine the company's reputation, and at the same time, environmental factors must be considered in its long-term strategy. The social aspect emphasizes equal opportunities, fairness in society such as human rights, workers' rights, and contribution to the local communities which can positively impact the whole society (Sherwood & Pollard, 2019). Equality and fairness are key values that represent social perspectives, such as prevention of abuse of labor rights, provision of various educational activities and basic stability to employees, and promotion of labor equality through a comprehensive set of policies. Lastly, governance stands for transparent enterprise operations with regard to their ethical behaviors, observance of laws or ethics, and strengthening of anti-corruption and fairness (Spitz et al., 2022). Instead of visible figures and financial aspects being valued in the past, many investors and customers focus on the level of corporate transparency and governance, which in turn further promotes overall business growth.

ESG fundamentally reflects the philosophy that it can be understood as a willingness to practice the value system for sustainable prosperity in the human community beyond the concept of investment guidelines for investors or corporate management strategies in the real world and embrace society's diverse interests for sustainable development. However, due to global interests and trends in ESG, many countries actively participate in related international discussions and reorganize related systems, and at the same time, step-by-step implementation and support measures for some countries, industries, or SMEs may be burdened by rapid institutional changes (Daszyńska-Zygadło et al., 2020).

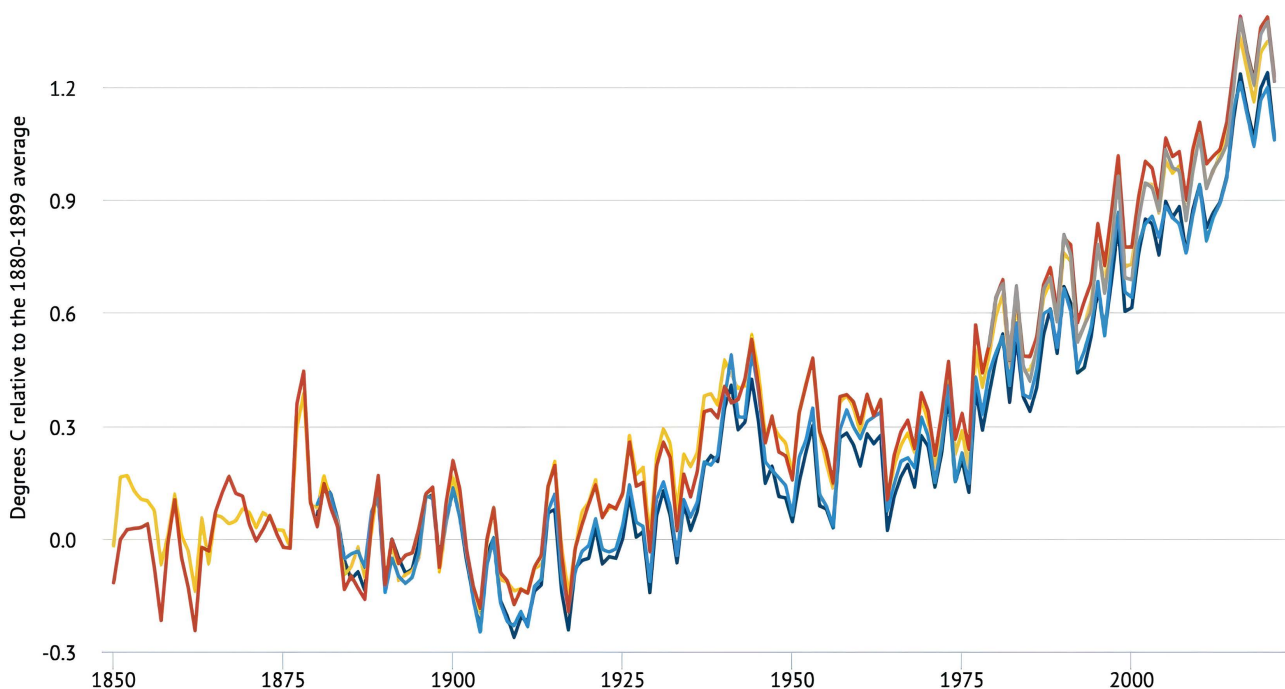
Green management refers to long-term and strategic management that sets environmental protection as a strategic goal in corporate management, develops environmentally friendly products, and aims to grow in harmony with environmental protection (Achillas, 2019). Implementing corporate policies that minimize negative impacts on the local environment, society, and economy is essential. Furthermore, companies should minimize greenhouse gas emissions or environmental pollution in their business activities by using efficient ways to save resources and energy. From the production planning stage to purchase,

process design, production, distribution, to consumer use and post-use disposition, the decision is made in consideration of environmental impact, and environmental issues are used more actively for management strategy (Waters, 2020). Furthermore, it prefers management that focuses on the possibility of sustainable development and identifies the organization as a whole, not a collection of parts, and adopts a management method for the long-term success of the company rather than the short-term. Green management also stresses the high quality that satisfies customer needs, while at the same time following the overall needs of the community and society.

3. The Importance of Green Management

3.1. Global Warming

Green management, which encourages the use of eco-friendly technologies and products, is now deeply related to global warming, the most common problem in the world. **Figure 1** illustrates the increasing global surface temperature records from 1850 to 2021. Greenhouse gases accumulated in the air do not dissipate easily over the decades, and global greenhouse gas emissions continue to rise as the global economy grows (Rehman, 2021). Due to the damage of climate change being very extensive, the importance of greenhouse gas regulation increased since the effects of global warming have had severe consequences nowadays. Over the past decade, up to 7 million flood victims have been reported in Asia and Australia, up to 180 million in North and South America experienced water shortages, and in Europe and Africa, dengue fever and encephalitis have



Source: Nasa Gistemp (2021).

Figure 1. Global surface temperature records (1850-2021).

increased due to rising temperatures caused by global warming, threatening the lives of people living in incurable areas or countries (Ullah et al., 2021).

3.2. Limited Natural Resources

The amount of natural resources and its stable availability are important factors in the country's economic development. However, fossil fuels such as oil, coal, and natural gas that we often use and minerals such as iron, copper, and zinc are limited since the growth rate of supply through regeneration is significantly lower than the growth rate of consumption (Richards & Simkins, 2014). In particular, countries with high import dependence on fossil fuels require a lot of attention to green management to increase energy independence. Regarding the trends in natural resources and their corresponding consumption patterns since the 1970s, UN Environment Programme (2019) mentioned that:

The extraction and processing of materials, fuels, and food contribute half of total global greenhouse gas emissions and over 90 percent of biodiversity loss and water stress. Resource extraction has more than tripled since 1970, including a fivefold increase in the use of non-metallic minerals and a 45 percent increase in fossil fuel use, and by 2060, global material use could double to 190 billion tones (from 92 billion), while greenhouse gas emissions could increase by 43 percent (para. 4).

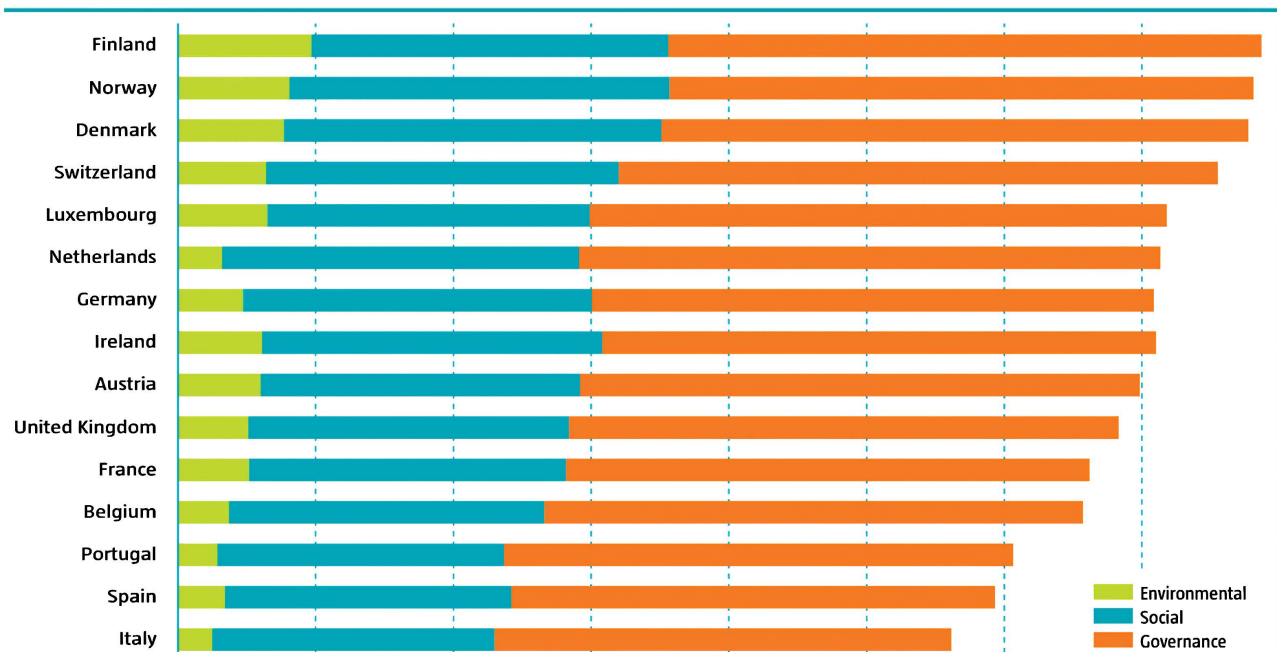
3.3. Increased Potential for Future Growth

Amid various trends related to the environment, the demand for new technologies, products, and services is expected to increase in the next-generation low-carbon economy, and companies that meet the needs of these buyers and realized growth would have tremendous opportunities to generate profits. Furthermore, ESG activities of companies are gradually affecting consumer behavior, and sales of related products are soaring as more and more consumers are willing to buy eco-friendly products if prices and quality are similar. According to BGF Retail, a Korean retail giant, sales surged by 80.4 percent compared to the same period last year when convenience store CU sold plastic-removed products to its own private brand mineral water, HEYROO mineral water, which is four times the total growth rate of bottled water (Oh & Koo, 2021). Consumer behavior to invest and consume in greener and nicer companies have become a trend which could be a good opportunity for companies to promote their potential influences in various fields.

4. Case Study

4.1. European Countries

Among the various European countries, Northern Europe nations are ranked at the top, including by Finland, Norway, and Denmark. All European countries have in common that they place the most importance on governance among the three areas of ESG, followed by social and environmental factors (Figure 2).



Source: Robeco (2021).

Figure 2. European countries ESG attributions.

However, while the ESG of Nordic and Central European countries is at the top, the sustainability ranking of Southern European countries is low, and most Eastern European countries are in the middle category (Ferrarini et al., 2021).

The European Union is very actively leading the spread and legislation of ESG policies and occupies the majority of the top ranks regarding the overall ESG rating. Recently, the EU established an ESG infrastructure and is engaged in five activities that help create a sustainable economic system. It is a comprehensive carbon reduction legislation called Fit for 55 that includes the introduction of Taxonomy Regulation, Sustainable Finance Disclosure Regulation, Corporate Sustainability Reporting Directive, due diligence for supply chains, and Carbon Border Adjustment Mechanism (Morais & Câmara, 2022).

Among the various European countries, Northern Europe nations are ranked at the top, including Finland, Norway, and Denmark. All European countries have in common that they place the most importance on governance among the three areas of ESG, followed by social and environmental factors (Figure 2). However, while the ESG of Nordic and Central European countries is at the top, the sustainability ranking of Southern European countries is low and most Eastern European countries are in the middle category (Ferrarini et al., 2021).

4.2. USA

Cash (2021) mentioned that under the Biden administration, the U.S. drafted national goals closely related to ESG, including restoring democracy and strengthening human rights, digital innovation and resolving inequality, community development, educational inequality, expanding diversity and equality, and ex-

panding corporate transparency and corporate responsibility (pp. 120-123). Biden has emphasized social values as well as environmental issues, as he has tried to resolve social conflicts and income polarization such as racial discrimination, strengthening labor rights, and gender discrimination since his inauguration. In addition, the government estimates the overall social cost of greenhouse gas emissions at the national security and foreign policy level, measures and evaluates the financial risk of climate change, prepares policies to regulate and supervise them, and seeks to link policies with non-financial risks (Erickson & Brase, 2020).

After the worldwide ESG announcement, various U.S. companies emphasize the importance of climate change risk management, human capital management, employee safety, supply chain resilience, and compliance with ESG practice. For instance, Clorox, the largest market shares in bleach and cleaning in the U.S., began to set out its climate and environmental sustainability goals in 2019 including plastic and other waste reduction, renewable energy use, water quality management, reducing plastic and fiber packaging by 50% by 2030 and replacing them with 100% recycled or composted packaging by 2025 (The Clorox Company, 2020).

4.3. Japan

Japan established a “diversity guideline” to operate a citation system for companies with excellent diversity, which encourages corporate diversity. Following the guideline, companies adopt a different management method from the past as they connect employees’ health to the company’s competitiveness by preparing a system such as the “health management certification system” that emphasizes the health management of executives and employees as a management strategy (OECD, 2022). Japan’s active national atmosphere, in which companies respond to ESG in various ways has sharply increased investment by companies that wish to realize ESG management. According to the “Japan’s ESG Response Strategy Analysis and Implications” report released by KOTRA, the global ESG investment increased 1.5 times from \$22 trillion in 2016 to \$35 trillion in 2020, while Japan increased six times from \$474 billion to \$2.874 trillion (Nemoto & Morgan, 2020).

The average ESG rating of the top 100 companies in South Korea, the U.S., and Japan was in the order of Japan, the U.S., and Korea, and the number of companies with the highest grade (AA or higher) was in the order of Japan, the U.S., and Korea. Although the Japanese government does not promote ESG mandatory policies for all companies like other European countries, it promotes active participation through step-by-step regulations on companies, such as accurate information disclosure, about their best practices. **Table 1** shows the percentage and ranking of companies in each country from AAA, the highest grade, to CCC, the lowest rank. Specifically, the number of Japanese companies with AAA ratings is 6, followed by the US companies (2) and Korean companies (0).

Table 1. Proportion of corporate ESG rankings in Japan, the U.S., and R.O.K.

Rating	Japan		U.S.A		R.O.K	
	Number of Enterprises	Ratio	Number of Enterprises	Ratio	Number of Enterprises	Ratio
AAA	6	6.9%	2	2.7%	0	0%
AA	17	19.5%	13	17.8%	3	6%
A	29	<u>33.3%</u>	16	21.9%	8	16%
BBB	20	23%	30	<u>41.1%</u>	15	<u>30%</u>
BB	8	9.2%	8	11%	15	<u>30%</u>
B	4	4.6%	4	5.5%	6	12%
CCC	3	3.5%	0	0%	3	6%
Total	87	100%	73	100%	50	100%

Source: Modified from Author (2022).

In Japan, grade A accounts for 33.3% of the total ratio, and in the United States grade BBB accounts for 41.1%, and finally, Korea accounts for 30% for BBB and BB grades combined, respectively.

Japan established a “diversity guideline” to operate a citation system for companies with excellent diversity, which encourages corporate diversity. Following the guideline, companies adopt a different management method from the past as they connect employees’ health to the company’s competitiveness by preparing a system such as the “health management certification system” that emphasizes the health management of executives and employees as a management strategy (OECD, 2022). Japan’s active national atmosphere in which companies respond to ESG in various ways has sharply increased investment by companies that wish to realize ESG management. According to the “Japan’s ESG Response Strategy Analysis and Implications” report released by KOTRA, the global ESG investment increased 1.5 times from \$22 trillion in 2016 to \$35 trillion in 2020, while Japan increased six times from \$474 billion to \$2.874 trillion (Nemoto & Morgan, 2020).

The average ESG rating of the top 100 companies in South Korea, the U.S., and Japan was in the order of Japan, the U.S., and Korea, and the number of companies with the highest grade (AA or higher) was in the order of Japan, the U.S., and Korea. Although the Japanese government does not promote ESG mandatory policies for all companies like other European countries, it promotes active participation through step-by-step regulations on companies, such as accurate information disclosure about their best practices. **Table 1** shows the percentage and ranking of companies in each country from AAA, the highest grade, to CCC, the lowest rank. Specifically, the number of Japanese companies with AAA ratings is 6, followed by the US companies (2) and Korea companies (0). In Japan, grade A accounts for 33.3% of the total ratio, and in the United States,

grade BBB accounts for 41.1%, and finally, Korea accounts for 30% for BBB and BB grades combined, respectively.

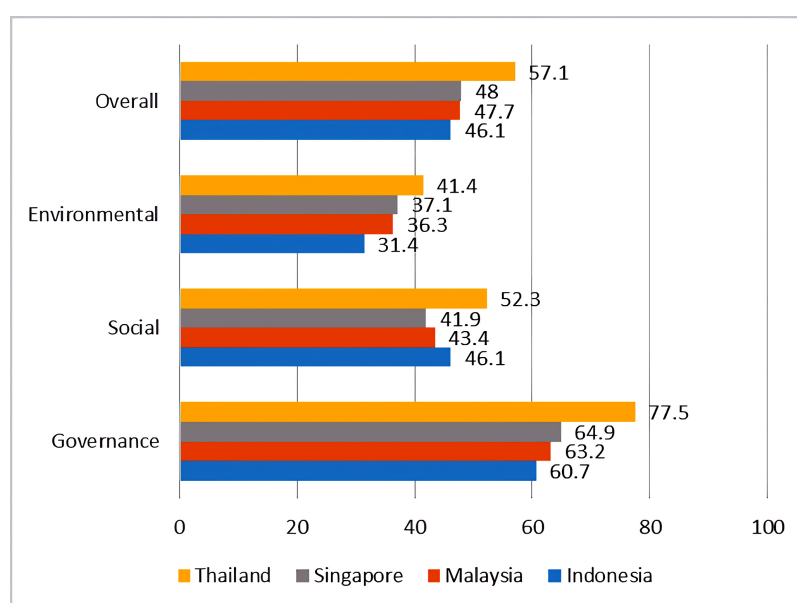
4.4. Thailand

Thailand is one of the leading countries in sustainable green management in Southeast Asia, standing shoulder to shoulder with the global company of major ESG management leaders. It also started to receive a major focus of Thai consumers and investment investors. Sustainability green management has already been mentioned as a major concern and future management policy for companies in Thailand for decades. Recently, the ESG concept of promoting sustainable development through eco-friendliness and governance improvement has become a major talking point (Asian Development Bank, 2022). Figure 3 illustrates the growing trend in investment in ESG activities in the five ASEAN countries, Thailand, Singapore, Malaysia, Indonesia, and Vietnam. Although it is still in the process of progress compared to other advanced member countries, Thailand has the upper hand when comparing its overall figures as well as environmental, social, and governance with the three Southeast Asian countries.

5. Thailand's Efforts on ESG Management

5.1. Thailand Sustainability Investment Index

The Stock Exchange of Thailand (SET) is recognized as one of the pioneering authorities in Thailand to recognize the importance of sustainability. In 2015, SET introduced the Thailand Sustainability Investment (THSI) list which includes Thai-listed companies that have notable ESG initiatives, aiming to promote and recognize the efforts of these companies (Luengwattanakit et al., 2022).



Source: Cahyadi et al. (2020).

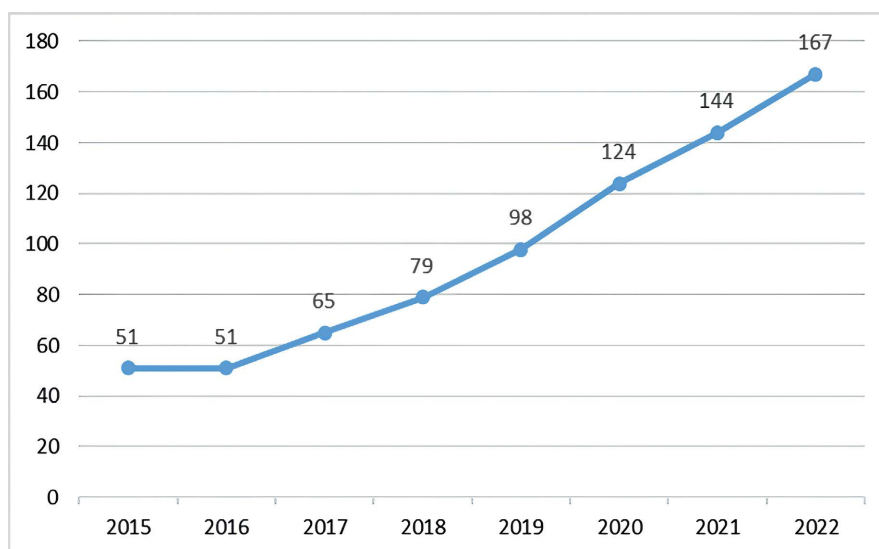
Figure 3. The trend of ESG in ASEAN.

SET defines sustainable companies as those that embrace risk management, supply chain management, and innovations together with responsibility for environmental, social, and governance aspects (SET, n.d.). The listed companies included in THSI are operated based on continuous Environment, Social, Governance management and transparency, promoting their long-term development and facilitating their inclusion in globally recognized ESG assessment institutions such as Dow Jones Sustainability Indices (DJSI) and Morgan Stanley Capital International (MSCI). Regarding the assessment of the listed company's sustainability performance, *The Stock Exchange of Thailand (2023)* mentioned that:

SET assesses a listed company's sustainability performance in four aspects: policy, process, performance, and disclosure. The policy demonstrates a commitment by enacting policies covering economic, environmental, and social issues. The process sets targets and processes for sustainability in business operations. Performance implements processes for monitoring and evaluating sustainability performance for continuous improvement. Lastly, discloses sustainability performance to stakeholders accurately and transparently (p. 2).

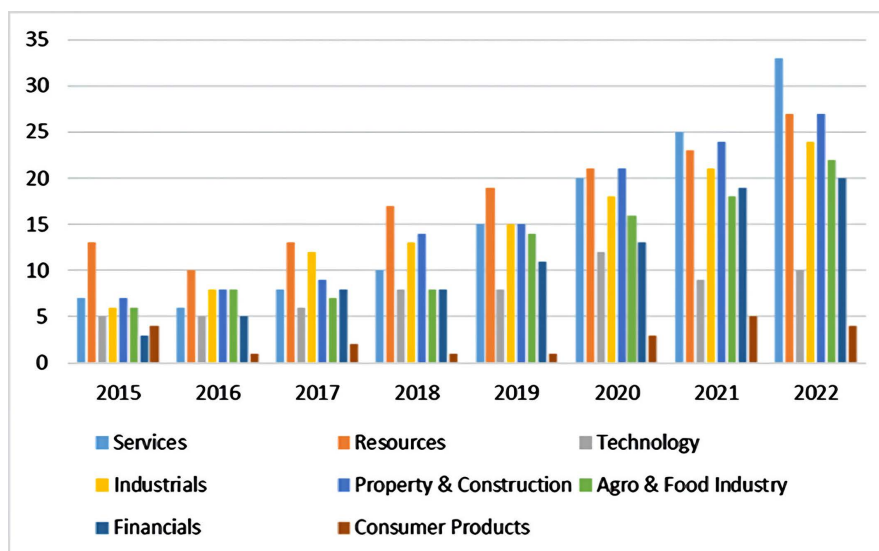
General and Industry-specific indicators in SET's Corporate Sustainability Assessment are not stagnant in their traditional evaluation approach but rather incorporate evolving societal standards and technological advancements. As a result, new criteria are being added to reflect these changes. According to SET's Corporate Sustainability Assessment (SET, 2023), three evaluations in the economic dimension, four evaluations in the environmental dimension, and three assessments in the social aspect have been newly incorporated recently (p. 3). In the economic dimension, the newly introduced evaluations include cyber security and information security, service quality management, and product quality management. Among the environmental criteria, the additions encompass building materials quality, product responsibility, responsible sourcing, and water-related risk, which have the highest number of introduced standards. In the social dimension, digital inclusion, responsible finance and insurance, and financial inclusion have been introduced.

The number of companies included in the THSI list, representing sustainable stocks, has increased over the years. In 2015, there were 51 companies, which grew to 124 in 2020, and further increased to 167 in 2022 (SET, 2022b). This trend reflects the proactive adoption of ESG management practices by Thai companies. **Figure 4** represents the number of Thai companies included in the THSI from 2015, when ESG was not as widely recognized as the present, where it has gained global attention since 2020. The eight industry sectors listed in THSI show steady growth from 2015 to 2022, with overall increasing trends rather than just one sector experiencing a drastic increase (**Figure 5**). In particular, the Resources sector, which had overwhelmingly dominated the proportion from 2015 to 2019, gained a nearly equal proportion to the Property &



Source: Modified from Author (2023), SET (2022a).

Figure 4. Number of Thai companies listed on THSI (2015-2022).



Source: Modified from Author (2023), SET (2022a).

Figure 5. Number of Thai companies listed on THSI by industry (2015 to 2022).

Construction and Services sectors in 2020. The Services sector took the lead from 2021, and there was a significant increase in the overall number of companies in various industry sectors. This indicates that ESG in Thailand is not concentrated in just one industry sector, and the continuous growth of THSI will contribute to the overall increase in Thailand's ESG index. Besides, it will also promote the fulfillment of international ESG index standards such as DJSI and MSCI.

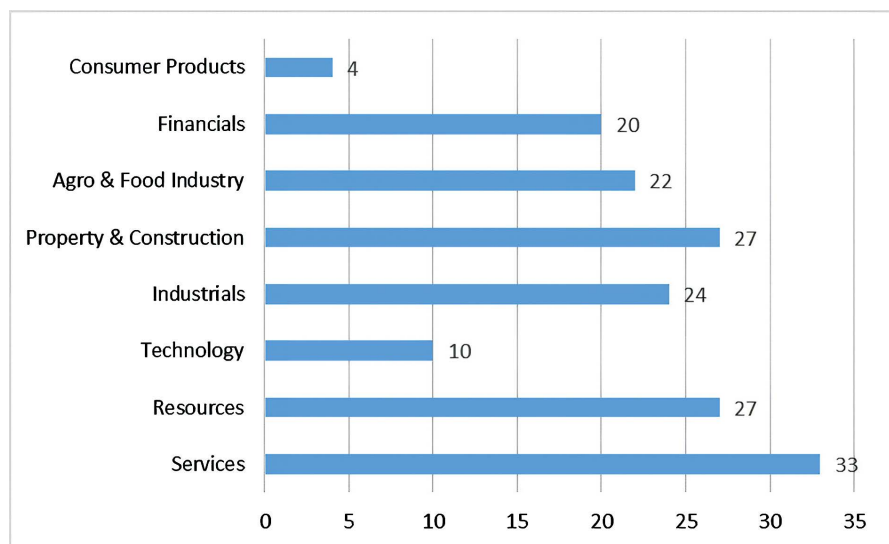
The year 2022 stands out as the year with the highest number of companies listed in THSI, reflecting the growing participation and interest of Thai companies. The 167 companies listed in the 2022 THSI represent various industry sectors, and among them, the top three industry sectors with the highest represen-

tation are Services (33), Resources (27), and Property & Construction (27). **Figure 6** presents the analysis based on SET's Executive Summary of THSI and THSI List 2015-2023, displaying the number of companies in the eight industry sectors listed in THSI. The companies listed in the 2022 THSI exhibit significant progress in the disclosure of environmental and social information, including policies and targets of environmental management, performance and efficiency in resource management related to energy efficiency, water, and waste management, as well as information on employees, communities, and society through business processes. SET mentioned that the listed companies, recognizing climate change and adopting policies and measures to reduce greenhouse gas emissions, are a positive development for ESG in Thailand. However, it is important to address issues such as human rights violations throughout the supply chain in order to further improve the rights of workers (Sustainable Stock Exchanges Initiative, 2022).

5.2. The Bank of Thailand

In February 2022, the Bank of Thailand (BOT) issued a guideline paper on transitioning to environmental sustainability within the domestic financial sector. The paper aims to provide guidance and direction for financial institutions in aligning their business operations with environmental considerations and addressing climate change, in order to promote sustainable financing (Wechsuanarux et al., 2023). The introduced policy encourages financial institutions to integrate environmental perspectives into their business operations and sets guidelines for their operations in consideration of environmental factors.

Thailand's ESG policy framework has mainly consisted of non-mandatory guidelines that companies can voluntarily adopt. However, there have been updates recently in the form of government ESG laws and policies that have legal



Source: Modified from Author (2023).

Figure 6. Number of company's industry listed in 2022 THSI.

requirements for companies to comply with. Furthermore, in August 2022, the Thai Bankers' Association (TBA) announced its ESG Declaration to set the banking industry's clear common direction in addressing the ESG agenda with proactive execution, while raising awareness on sustainability among stakeholders and driving Thai economy toward sustainable growth (Bank of Thailand, 2022). Thai Bankers' Association members agreed on six shared action priorities in ESG Declaration regarding Governance, Strategy, ESG Risk Management, Financial Products, Communication, and Disclosure (Kabange, 2022).

Firstly, responsibility for effective corporate governance in relation to ESG is upheld, ensuring a strong commitment to accountability. Secondly, the integration of ESG into business strategies promotes sustainable finance in Thailand, contributing to the realization of the net zero emissions target. Thirdly, ESG elements are integrated and utilized in risk management practices, enhancing overall risk assessment and mitigation efforts. Fourthly, the utilization of digital technologies enhances financial accessibility for customers, enabling their participation in sustainable growth. Fifthly, effective communication with all stakeholders raises awareness and fosters public consciousness regarding ESG issues. Lastly, monitoring and reporting systems are developed and utilized in accordance with global standards and Thailand's regulatory framework. Recent developments in BOT and TBA indicate significant progress in Thailand compared to the previous years. Besides, these developments showcase Thailand's substantial advancements, not only in individual corporates but also in terms of new regulations and policies at the national level concerning ESG.

5.3. The Guidance on Modern Slavery Risks for Thai Businesses

In 2022, the Stock Exchange of Thailand (SET) formed a partnership with the international human rights organizations including Walk Free, which strives to end all forms of modern slavery, and Finance Against Slavery and Trafficking (FAST), a United Nations University Centre for Policy Research that works to mobilize the financial sector against modern slavery and human trafficking (The Stock Exchange of Thailand, 2022).

The first guideline encompasses the issues of modern slavery that occur throughout the value chain of Thai-listed companies and provides guidance on how to address these issues and mitigate risks. Especially, the guideline provides an overview of specific industry risks in Thailand, offering a checklist for businesses to identify these risks and outlining strategies for addressing and reporting on them (Sustainable Stock Exchanges, 2022). Developing countries with low human rights standards are unable to escape modern slavery, and this problem is rampant in Thailand. Among Thailand's ESG evaluation criteria, the category that consistently receives the lowest ratings are the labor rights and human rights of employees. According to Guidance on Modern Slavery Risks for Thai Businesses (The Stock Exchange of Thailand, Walk Free, & Finance against Slavery and Trafficking, 2022):

“Walk Free's Global Slavery Index in 2018 estimated that 610,000 people

(8.88/1,000 people) were living in modern slavery in Thailand. Industries in Thailand where modern slavery frequently occurs include not only exploitation in the fishing industry and debt bondage, but also encompass five categories of child or forced labor, namely in pornography, sugarcane production, fishing, garment production, and the shrimp industry. In 2015, the child exploitation and modern slavery issues in Thailand's fishing and seafood industries were widely reported through the global media. This led the European Commission to issue a 'yellow card' warning to Thailand, threatening to ban imports of Thai seafood (p. 16)."

A reason why the Thai government and corporates cannot ignore these issues is that Thailand maintains close relationships with many developed countries around the world. Specifically, exports in industries such as agriculture, fisheries, and automobiles make up a significant portion of the Thai economy. Thailand is among the top three seafood exporters in the world. Seafood exports account for approximately 20 percent of Thailand's total food product exports.

The "yellow card" warning issued by the EU, a main destination for Thai seafood trade, would have resulted in a cost of about 500 million dollars (Thailand Convention & Exhibition Bureau, 2018). For Thailand to step out of the developing country category, achieve sustainable economic growth, and meet international ESG standards, Thai businesses, and investors must manage and mitigate risks related to social parts. Furthermore, SET is striving hard to enable many Thai-listed companies to achieve sustainable development by listing them following global ESG indices, which involves promoting their participation in ESG and activating their THSI. Furthermore, the Guidance on Modern Slavery Risks for Thai Businesses might address and enhance the weakest part of Thailand's ESG element such as labor rights and human rights.

6. Thailand's Potential Future Development

6.1. Sustainable Development Report

In 2023, Thailand emerged as the top-ranked country in the Association of Southeast Asian Nations (ASEAN) according to the Sustainable Development Report by the United Nations Sustainable Development Solutions Network (UNSDSN) (Gupta, 2023). The Sustainable Development Report by the UNSDSN evaluates the progress made by 166 UN member states towards achieving the 17 Sustainable Development Goals (SDGs) and calculates the percentage of achievement. A score of 100% indicates that all SDGs have been fully achieved. According to Sustainable Development Solutions Network (2023), Thailand ranked 43th globally and secured the top position in the ASEAN region with an achievement rate of 74.7% while the regional average is 67.2% (p. 464).

Table 2 shows that following Thailand, the rankings for other ASEAN countries are as follows: Singapore (71.8%), Malaysia (69.9%), Indonesia (70.2%), Philippines (67.1%), Myanmar (60.4%), Cambodia (64.8%), and Laos (63.0%). In particular, Thailand is making efforts to achieve SDG Goals 1, 6, and 7, which

Table 2. Achievements of SDGs by eight ASEAN countries in 2023.

	Thailand	Singapore	Malaysia	Indonesia	Philippines	Myanmar	Cambodia	Laos
Country Ranking	43	64	78	75	98	125	103	115
Country Score	74.7	71.8	69.9	70.2	67.1	60.4	64.8	63.0
On Track SDG Achievement	1, 6, 7	6, 12, 13	1	1, 4, 6	6	4	X	6

Source: Modified from Author (2023).

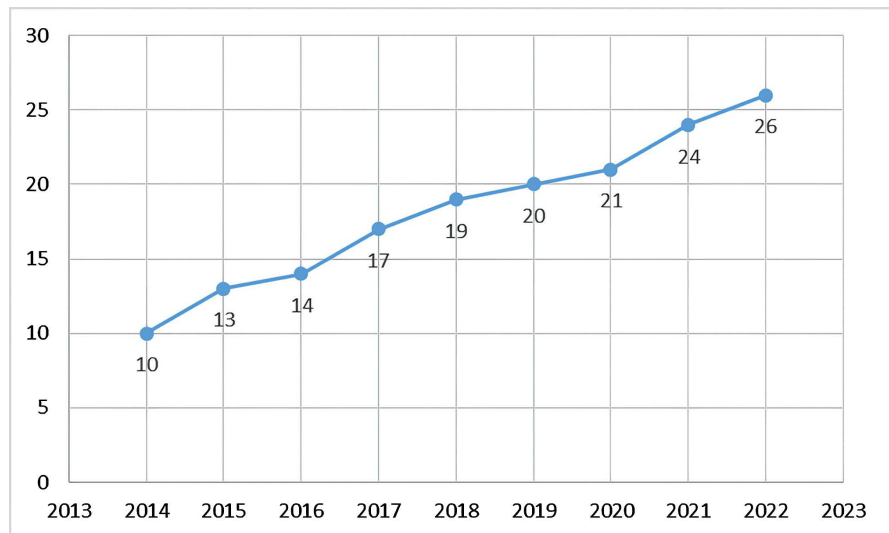
are No Poverty, Clean Water and Sanitation, and Affordable and Clean Energy, respectively. Compared to other countries in the region, Thailand stands as a leading nation in ASEAN and demonstrates continuous efforts towards sustainable development. This is evident in its focus on environmental aspects, as seen in its commitment to SDG Goals 6 and 7. Thailand's dedication to sustainable and inclusive development highlights its proactive approach in addressing environmental concerns.

6.2. Dow Jones Sustainability Indices

Dow Jones Sustainability Indices (DJSI) is a series of global sustainability benchmarks that measure and assess companies' sustainability performance. The indices provide a comprehensive framework for investors, companies, and stakeholders to understand and compare sustainability performance. The DJSI has been developed collaboratively by S&P Dow Jones Indices and RobecoSAM, and it evaluates various aspects of ESG factors to identify companies that demonstrate strong sustainability practices and leadership within their industries (Güller, 2023).

As interest in ESG management grows, sustainability indices have become a benchmark for companies in the eyes of customers and investors. Besides, the perception has emerged that companies with high index scores have high potential for sustainable development in the future. Thailand holds the highest number of listed companies among ASEAN countries, and this trend has continued for nine consecutive years. Starting from 2014 with 10 companies listed on the DJSI, the number increased to 20 companies in 2019. Since then, the number has shown steady growth, with 21 companies listed in 2020, 24 companies in 2021, and 26 companies in 2022 (Figure 7).

In addition to the companies previously listed on the DJSI, three new companies were added in 2022: Central Retail Corporation, Global Power Synergy, and SCG Packaging. As of December 19, 2022, the Thai companies listed on the DJSI include Advanced Info Service, Airports of Thailand, Banpu, Bangkok Dusit Medical Services, Berli Jucker, BTS Group Holdings, CP All, Central Pattana, Central Retail Corporation, Charoen Pokphand Foods, Delta Electronics Thailand, Electricity Generating, Global Power Synergy, Home Product Center, IRPC, Indorama Ventures, Kasikornbank, Minor International, PTT, PTT Global Chemical, Siam Commercial Bank, Siam Cement PCL, SCG Packaging, Thai Oil PCL, True Corporation, and Thai Union Group (The Nation Thailand, 2022).



Source: Modified from Author (2023).

Figure 7. The numbers of Thai listed firms on DJSI (2014-2022).

The growing number of Thai listed companies included in the Thai ESG index, THSI, the international index, and DJSI, demonstrate Thai government and Thai companies' commitment to prioritizing ESG criteria and performance.

7. Conclusion

Thailand's ESG landscape is steadily evolving, positioning itself as a leader in the ASEAN region, with various categories of companies committed to implementing ESG management practices. ESG indices such as THSI, DJSI, and MSCI are witnessing an annual increase in the number of listed companies, signifying a growing trend of exploration and innovation in management approaches. Notably, since 2022, several guidelines focusing on ESG have been introduced, which are expected to facilitate greater participation of Thai domestic companies in ESG initiatives. Furthermore, the significant rise in ESG-related reporting since 2021, coupled with various new policies from the Thai Stock Exchange (SET), reflects active government involvement in promoting ESG practices. However, it is crucial to address certain ESG challenges in Thailand, particularly in the social dimension. Issues related to labor rights, human rights, and labor environment improvements must be tackled comprehensively. These challenges, while demanding, provide an opportunity for Thai companies to demonstrate their commitment to ethical and socially responsible practices. These ongoing changes set the stage for Thai companies to solidify their influence on the global stage, even as they compete with more advanced corporations. Additionally, these efforts are expected to stimulate economic and social transformations within Thailand, signaling a shift towards corporations that are more environmentally conscious and socially responsible. Consequently, Thailand is well-positioned to strengthen its role as a leading nation in paving the way for a sustainable future that addresses not only environmental concerns but also social and ethical dimensions.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

References

- Achillas, C. (2019). *Green Supply Chain Management*. Routledge, Taylor & Francis Group. <https://doi.org/10.4324/9781315628691>
- Asian Development Bank (2022). *Green Infrastructure Investment Opportunities: Thailand 2021 Report*. Asian Development Bank. <https://doi.org/10.22617/TCS210495-2>
- Bank of Thailand (2022). *TBA Launches ESG Declaration, a Strong Collective Commitment to Expediting Sustainable Development toward Better and Greener Economy*. Bangkok.
- Barker, R. M., & Chiu, I. H.-Y. (2017). *Corporate Governance and Investment Management: The Promises and Limitations of the New Financial Economy*. Edward Elgar Publishing.
- Cahyadi, E. R., Najib, M., Hubeis, M., & Suryawati, R. F. (2020). *Sustainable Management and Innovation, ICoSMI 2020*. https://www.google.co.jp/books/edition/ICoSMI_2020/uXY6EAAAQBAJ?hl=en&gbpv=0
- Cash, D. (2021). *Sustainability Rating Agencies vs Credit Rating Agencies: The Battle to Serve the Mainstream Investor*. Palgrave Macmillan. <https://doi.org/10.1007/978-3-030-71693-6>
- Daszyńska-Zygadło, K., Bem, A., Ryszawska, B., Jáki, E., & Hajdíkóvá, T. (2020). *Finance and Sustainability: Proceedings from the 2nd Finance and Sustainability Conference, Wrocław 2018*. Springer. <https://doi.org/10.1007/978-3-030-34401-6>
- Erickson, L. E., & Brase, G. (2020). *Reducing Greenhouse Gas Emissions and Improving Air Quality: Two Interrelated Global Challenges*. CRC Press, Taylor & Francis Group. <https://doi.org/10.1201/9781351116589>
- Ferrarini, G., Busch, D., & Grünewald, S. N. (2021). *Sustainable Finance in Europe: Corporate Governance, Financial Stability and Financial Markets*. Palgrave Macmillan.
- Güller, R. (2023). *What Are the Dow Jones Sustainability Indices (DJSI)?* Sweep. <https://www.sweep.net/library/what-are-the-dow-jones-sustainability-indices-djsi>
- Gupta, A. (2023). *Thailand Ranked 44th in Sustainable Development Report*. Thailand Business News. <https://www.thailand-business-news.com/environment/95377-thailand-ranked-44th-in-sustainable-development-report>
- Hill, J. (2020). *Environmental, Social, and Governance (ESG) Investing: A Balanced Review of Theoretical Backgrounds and Practical Implications*. Academic Press.
- Kabange, S. C. (2022). *Thai Banks Pledge to Accelerate Action on ESG, Climate*. Regulation Asia. <https://www.regulationasia.com/thai-banks-pledge-to-accelerate-action-on-esg-climate>
- Kokubu, K., & Nagasaka, Y. (2020). *Sustainability Management and Business Strategy in Asia*. World Scientific. <https://doi.org/10.1142/11274>
- Luengwattanakit, P., Tungsuwan, P., Sriwasumetharatsami, S., Yi, J., & Sooppipat, C. (2022). *Thailand: Sustainability and Investment Promotion Schemes in Thailand (Part 1)*. Global Compliance News. <https://www.globalcompliancenes.com/2022/06/24/thailand-sustainability-and-investment-promotion-schemes-in-thailand-part1-07062022/>

- Morais, F., & Câmara, P. (2022). *Palgrave Handbook of ESG and Corporate Governance*. Springer Nature.
- NASA (2021). *Data.GISS: GISS Surface Temperature Analysis (GISTEMP v4)*. NASA. <https://data.giss.nasa.gov/gistemp/>
- Nemoto, N., & Morgan, P. J. (2020). *Environmental, Social, and Governance Investment: Opportunities and Risks for Asia*. Asian Development Bank Institute.
- OECD (2022). *Corporate Governance Climate Change and Corporate Governance*. https://www.google.co.jp/books/edition/Corporate_Governance_Climate_Change_and/Vgp0EAAAQBAJ?hl=en&gbpv=1
- Oh, H.-J., & Koo, E.-S. (2021, January 15). *Korea Requires Major Companies to Disclose ESG Activities from 2025*. KED Global. <https://www.kedglobal.com/esg-management/newsView/ked202101140014>
- Rehman, K. S. A. (2021). *Critical Success Factors of Green Supply Chain Management in Emerging Economies*. Springer Nature. <https://doi.org/10.1007/978-3-030-42742-9>
- Richards, J., & Simkins, E. (2014). *Natural Resources*. Wayland.
- Robeco (2021). *Sustainability Report 2021*. ROBECO The Investment Engineers. <https://www.robeco.com/docm/doc-robeco-sustainability-report-2021-online.pdf>
- Samans, R., & Nelson, J. (2022). *Sustainable Enterprise Value Creation*. Springer International Publishing. <https://doi.org/10.1007/978-3-030-93560-3>
- SET (2022a). *Dow Jones Sustainability Indices (DJSI). Sustainable Capital Market Development*. <https://www.setsustainability.com/libraries/1155/item/-dow-jones-sustainability-indices-djsi?category=21&type=&search>
- SET (2022b). *As of the Year 2565 (Latest Year)—167 Companies*. The Stock Exchange of Thailand.
- SET (2023). *Corporate Sustainability Assessment 2023 for Thailand Sustainability Investment (THSI)*. <https://setsustainability.com/download/b3zk5xnjpwuh8rt>
- SET (n.d.). *Setthsi Index Profile—The Stock Exchange of Thailand*. <https://www.set.or.th/en/market/index/setthsi/profile>
- Sherwood, M. W., & Pollard, J. (2019). *Responsible Investing: An Introduction to Environmental, Social, and Governance Investments*. Routledge. <https://doi.org/10.4324/9780203712078>
- Spitz, K., Trudinger, J., & Orr, M. (2022). *Environmental Social Governance Managing Risk and Expectations*. CRC Press, Taylor and Francis Group. <https://doi.org/10.1201/9781003134008>
- Sustainable Development Solutions Network (2023). *Sustainable Development Report 2023*. <https://s3.amazonaws.com/sustainabledevelopmentreport/2023/sustainable-development-report-2023.pdf>
- Sustainable Stock Exchanges (2022). *Exchange in Focus: Stock Exchange of Thailand Launches Guidance on Modern Slavery Risks*. Sustainable Stock Exchanges. <https://sseinitiative.org/all-news/exchange-in-focus-set-launches-guidance-on-modern-slavery-risks/>
- Sustainable Stock Exchanges Initiative (2022). *Exchange in Focus: Stock Exchange of Thailand Launches Guidance on Modern Slavery Risks*. <https://sseinitiative.org/all-news/exchange-in-focus-set-launches-guidance-on-modern-slavery-risks/>
- Thailand Convention & Exhibition Bureau (2018). *Thailand's Seafood Industry*. MICE

- Intelligence Center.
<https://intelligence.businesseventsthailand.com/th/keyindustries-details/seafood-eng>
- The Clorox Company (2020). *The Clorox Company 2020 Integrated Annual Report*.
https://s21.q4cdn.com/507168367/files/doc_financials/2020/ar/clorox_2020_integrated_report_executive_summary.pdf
- The Nation Thailand (2022). *Thai Companies Top ASEAN on Dow Jones Sustainability Indices for 9th Year*. Nation Thailand.
<https://www.nationthailand.com/thailand/economy/40023029>
- The Stock Exchange of Thailand (2023). *Thailand Sustainability Investment*.
- The Stock Exchange of Thailand, Walk Free, & Finance against Slavery and Trafficking (2022). *Guidance on Modern Slavery Risks for Thai Businesses*. Walk Free.
- Ullah, H., Khan, I. A., Hasanuzzaman, M., Adnan, M., Saeed, M., Alam, M., & Fahad, S. (2021). *Environment, Climate, Plant and Vegetation Growth*. Springer Nature.
- UN Environment Programme (UNEP) (2019). *We're Gobbling up the Earth's Resources at an Unsustainable Rate*.
<https://www.unep.org/news-and-stories/story/were-gobbling-earths-resources-unsustainable-rate>
- Waters, B. (2020). *Introduction to Environmental Management: For the Nebosh Certificate in Environmental Management*. Routledge.
<https://doi.org/10.4324/9781315104522>
- Wechsuwanarux, N., Sirilerkwipas, S., & Phantophas, J. (2023). *Catching the Next ESG Wave: Thailand's Latest Developments*. Lexology.
<https://www.lexology.com/library/detail.aspx?g=cb75c9cc-8359-481e-9d68-95c39ed96088>