

June 2021

## What can Indonesian Businesses Learn from the We Mean Business Initiative to Address Climate Change?

Erla Mychelisda

*Economic Research Center, the Indonesian Institute of Sciences*

Nur Firdaus

*Economic Research Center, the Indonesian Institute of Sciences*

Follow this and additional works at: <https://scholarhub.ui.ac.id/jbb>



Part of the [Entrepreneurial and Small Business Operations Commons](#), and the [Public Affairs, Public Policy and Public Administration Commons](#)

---

### Recommended Citation

Mychelisda, Erla and Firdaus, Nur (2021) "What can Indonesian Businesses Learn from the We Mean Business Initiative to Address Climate Change?," *BISNIS & BIROKRASI: Jurnal Ilmu Administrasi dan Organisasi*: Vol. 28 : No. 2 , Article 2.

DOI: 10.20476/jbb.v28i2.1277

Available at: <https://scholarhub.ui.ac.id/jbb/vol28/iss2/2>

This Article is brought to you for free and open access by the Faculty of Administrative Science at UI Scholars Hub. It has been accepted for inclusion in *BISNIS & BIROKRASI: Jurnal Ilmu Administrasi dan Organisasi* by an authorized editor of UI Scholars Hub.

# What can Indonesian Businesses Learn from the We Mean Business Initiative to Address Climate Change?

Erla Mychelisda<sup>1</sup>, Nur Firdaus<sup>2</sup>

*Economic Research Center, Indonesian Institute of Sciences, Indonesia<sup>1,2</sup>*

erla001@lipi.go.id<sup>1</sup>, nurf004@lipi.go.id<sup>2</sup>

**Abstract.** Climate change has been a much-discussed topic around the globe, and all stakeholders, including the business sector, must take collective and serious actions. The We Mean Business (WMB) initiative is a non-profit organisation that supports companies to develop policies and accelerate the transition to a low-carbon economy and achieve sustainable business. On the other hand, Indonesia, as one of the world biggest emitters and signed the Paris Agreement, are also required to meet its climate pledge. Unfortunately, not many Indonesian businesses have shown their contribution to climate change. This study aims to analyse the companies' commitments under the WMB coalition and evaluates the progress, risks, and opportunities they have faced when fulfilling these task. Concerning the existing condition of the Indonesian business sector, this study is expected to provide lessons learnt from companies around the world joining the WMB coalition. For analysis, a qualitative method through desk research was employed in which any documents related to the report of companies' commitment to climate change were thoroughly interpreted. Thirty-eight companies joining the WMB from eleven sectors were selected as the sample. The results show that the science-based target initiative (SBTi) is the most popular, while sustainable fuels are a less preferable commitment among the firms. Besides, most companies have shown considerable progress in achieving their duty towards climate change. These results can be lessons learnt for Indonesian businesses to implement the same initiatives to contribute to emissions reductions so that Indonesia can meet its climate pledge within the specified time.

**Keywords:** climate change, low-carbon economy, We Mean Business (WMB) initiative, Indonesian businesses, sustainable business

---

## INTRODUCTION

Climate change has been a much-discussed topic around the globe, and all stakeholders, including the business sector, must take collective and severe actions. In response, the Paris Agreement (COP21), which entered into force on the 4th of November 2016, has become a milestone towards fighting against climate change. The message was clear to limit the increase in the global temperature well below 1.5°C pre-industrial levels (UNFCCC, 2015). Consequently, countries that have signed and ratified the agreement are required to contribute to reducing greenhouse gas (GHG) emissions as soon as possible to achieve carbon-neutral at least in the second half of this century. In practice, they are responsible for setting the carbon reduction target in the form of nationally determined contribution (NDC) during the specific time.

Apart from this, the Paris Agreement has created a global momentum for not only nations but also the business sector and individuals to work collectively in combating climate change. Concerning this, specifically, the business sector is encouraged to embrace climate change in response to external stakeholder pressure to achieving sustainable business (Okereke et al., 2012; Liesen et al., 2015; Dyllick & Muff, 2016). The business sector is operationally and financially exposed to climate-related risks. The Task Force on Climate-related Financial Disclosures (TCFD) has assessed this issue and recommended companies to pay attention to climate change by providing

information to their stakeholders, particularly investors, lenders, and insurers. Thus, the business sector needs to transform since the standard business model methods and tools are rarely a sustainable driven (Evans et al., 2017). Also, businesses may fail to respond to climate change due to limited interaction amongst them (Finke, Gilchrist, & Mouzas, 2016) so collective actions are needed to achieve the target successfully.

The business sector is responsible for activities conducted by companies that have significant environmental damage (Hormio, 2017). Although the climate initiatives and programs adopted by companies are voluntary, their actions are indeed critical and more environmentally effective (Wakabayashi, 2013). However, the two factors, such as managerial cognitive and organisational capability determine how effective the responses and strategies to climate change made by the companies (Lei, Voss, Clegg, & Wu, 2017). The business sector is a critical player in addressing climate change in which companies are required to share practices related to GHG emissions reduction. Besides, their actions support the government in shaping climate policies to achieve the emission reduction target. To this, there is an organisation, known as the We Mean Business (WMB) that connects companies and helps them to develop policies and accelerate the transition to a zero-carbon economy by at least one of twelve commitments under the initiative.

As a coalition consisting of seven international

non-profit organisations, the WMB encourages companies to take actions on climate change in which they should focus on meeting energy demand, and parallelly reduce energy consumption with innovative solutions. Companies joining the WMB realise that their activities link with the environment so that their business should have a small effect on environmental degradation. This argument indicates that companies need to change their business paradigm from business-as-usual to sustainable business. Thus, they need to integrate social and environmental issues with economic issues to respond to climate challenges.

Furthermore, there is a belief that companies will gain benefits when their paradigm has shifted to sustainable business. Companies are motivated to disclose their carbon footprints due to reputation (Liesen et al., 2015; Jones & Phillips, 2016). By joining the sustainable commitment, companies may increase their competitiveness and differentiate from the competitors (Schultz, Kingdom, & Williamson, 2005; Walsh & Dodds, 2017) so that more clients will work with companies. Besides, commitments on climate change will bring energy efficiency, cost savings (Schultz et al., 2005), and revenue opportunity, which can drive to sustainable business growth in the long run.

Since the business sector is encouraged to take actions on climate change which is then supported by the WMB, it is necessary to evaluate how far companies joining the WMB has transformed their business and contribute to emissions reduction. In other words, reducing emissions and turning into sustainable business to accelerate the transition to a low-carbon economy are not “window dressing” activities for satisfying stakeholders. In this regard, tackling climate actions is not the government responsible alone; in fact, these actions require other parties to join in creating a better world. Thus, the business sector can play a pivotal role to address climate change.

Along with the WMB’s mission, as one of the world biggest emitters, Indonesia had signed the Paris Agreement, which is required to set the target within the specified period. It has been argued that addressing climate change need collective actions aligning with the effort to move towards a low-carbon economy as expected by the government (Ministry of National Development Planning [Bappenas], 2019). In practice, the Indonesian government, through the Indonesia Financial Services Authority (OJK) has promoted sustainability for business as stipulated in OJK Regulation No. 51/POJK.03/2017 concerning Application of Sustainable Finance to Financial Services Institution, Issuer and Publicly Listed Companies. This regulation is in line with the Task Force on Climate-related Financial Disclosures (TCFD)’s a recommendation that encourages companies to disclose their activities related to environmental, social and governance (ESG). However, in 2016, Ernst & Young reported that only around 30% of the top 100 publicly listed companies in Indonesia Stock Exchange submitted sustainability

report (Majalah CSR, 2017). This evidence shows that Indonesian companies are reluctant and less likely to consider the importance of the sustainability report (Rahayu, 2018).

Despite an increase in awareness of climate change among businesses globally, Indonesian companies seem to be lagging in issues related to sustainability disclosures. As discussed, companies are required to take actions on climate change, and the progress should be included in the sustainability report. The WMB coalition invites companies to join voluntarily in combating climate change by taking initiatives as proposed. In 2019, 911 companies were participating in the WMB coalition, but only two Indonesian companies were recorded to join the alliance (WMB, 2019). Although the WMB coalition is voluntary, the business sector must take part in climate mitigation and adaptation for helping the government in achieving its climate target. As it has been argued that companies are more attractive for investors and outperform if they include climate issues in their business. Therefore, the objective of this study is to analyse the company’s commitments under the WMB coalition to achieve a zero-carbon economy. This analysis includes the evaluation of the companies’ commitment patterns, risks and opportunities they have faced when fulfilling the commitments, as well as the progress made. Besides, as a limited number of Indonesian companies joining the WMB coalition; thus, this study also provides an analysis that can be used as a reference for Indonesian companies aiming to reduce their emission and create a sustainable business.

The remainder of this paper proceeds as follows. Section 2 presents the theoretical background of business responsibility related to adaptation and mitigation of climate change. This section also discusses the WMB coalition framework, including the theory behind the commitments. Section 3 describes the methodology, including data and variables. Section 4 presents the results and discusses lessons learnt for Indonesian businesses. Section 5 is the conclusion, limitation, and future research.

### **Business Responsibility Related to Adoption and Mitigation of Climate Change**

The Paris Agreement becomes a signal to all stakeholders taking part in addressing climate change. Besides, serious actions, strong commitment, and collective works are the key drivers to achieve GHG emissions reductions. Okereke et al., (2012) state that achieving emission reductions and economic growth simultaneously has become new challenges both for business and government after the latest economic crisis.

As a long-term problem, climate change has attracted widespread attention. The business sector, for example, has taken socially responsible actions and plays a critical role although their movements are voluntary. This is because companies are aware of the impact of climate change on their business activities.

Consequently, companies have started to integrate emission reduction initiatives with their business strategy. Therefore, they are encouraged to set their emissions reduction target and implement initiatives, which should be in line with the Paris Agreement.

Furthermore, from the investor's point of view, companies will be evaluated using environmental, social, and governance (ESG) criteria to determine the attractiveness of an investment. These criteria can help investors to avoid companies that have a higher financial risk caused by their environmental practices. As a result, taking actions on climate change requires companies to improve their business model to be more sustainable. Based on previous studies, Heikkurinen et al., (2019) explain two key drivers in promoting sustainable business. From the demand side, there is a change in consumer attitudes and behaviour regarding "green" awareness while on the supply side, the companies change their business model due to sustainability issues through the development of green products and services. However, they argue that sustainable change cannot be only communicated by improving the quality of the products and services, but also the companies need to adjust the quantity of economic activity. Besides, companies need to understand that climate change is a management improvement opportunity (Hickmann, 2017).

Mitigating climate change done by companies have motivations (Lazaro, Gremaud, & Benites, 2018). Most companies attempt to gain a competitive advantage and increase profit by improving the quality of their products and services through an environmentally friendly way. Also, companies are keen to improve their reputation (Jones & Phillips, 2016). On the other hand, companies realise that climate change will affect business operation significantly and pose disruptions. As a result, companies need to solve the problem and start to reduce GHG emissions as their sustainability will depend on their responsiveness to climate change. Companies must be socially responsible because pressure groups, such as environmentalists, NGO, and society, or even investors will criticise them.

Therefore, companies mitigating climate change are encouraged to report their emissions progress. This action is crucial to help companies in assessing and evaluating the impact of climate change and tracking how far their target has been achieved (Comyns, 2018). Another point to be considered is that reporting GHG emissions can meet public expectations and maintain corporate legitimacy (Hrasky, 2011), and satisfy stakeholder informational needs (Liesen et al., 2015).

### The "Theory of Change": The We Mean Business (WMB) Coalition Framework

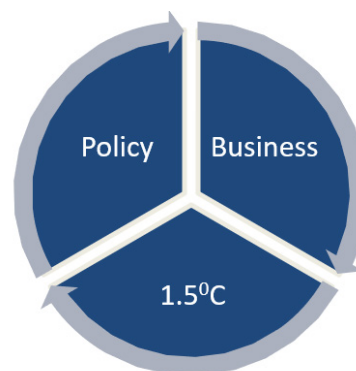
The business sector is one of the key actors that can work with the government to achieve the emissions reduction target. Since the business sector plays a pivotal role, a coalition among companies will accelerate the transition to a low-carbon economy. The We

Mean Business (WMB), a global non-profit coalition, has been working with the most valuable and leading companies to combat climate change. Also, the WMB emphasises on the combination of sound business decisions and active policy engagement to accelerate the zero-carbon transition, known as "Theory of Change" (see Fig. 1).

The theory of change (TOC) focuses on three interconnected pillars, namely policies, businesses, and the climate goal. This theory is the basis for identifying activities and interventions that lead to the expected outcomes. From the theory of change depicted in Figure 1, it is clear that ambitious policies made by governments to achieve sustainable growth and limit the global temperature to 1.5°C requires a transformation of the economic system. However, this needs the role of government in translating policies for business and encouraging businesses to have bold commitments. On the other hand, companies need clarity related to targets and timeliness to increase their confidence level to make an investment in the technologies and markets for the net-zero economy in the future. This is in line with a study conducted by Sakhel (2017), that is, companies in regulated industries implement more regulatory response measures related to climate risk management. Following this, businesses need to set ambitious and measurable targets and apply them to have a significant impact. As tackling climate change requires collective and collaborative actions, cooperation with investors, cities, states, and regions as well as civil society groups to accelerate the transition to a low-carbon economy. Therefore, it is expected that the dual goals of reducing GHG emissions and maximising economic growth can be achieved.

Moreover, TOC is an important approach used under the WMB coalition because the method promotes a precise pace to set up targets, assumptions, and impacts of potential enhancement. This detail enables stakeholders to re-evaluate the feasibility to reach the targets as well as encourage a long-term goal that is reasonable to all. In this sense, leads to better planning and evaluation. There are several stages in forming TOC: Identifying long-term goals and assumptions; Backwards mapping and explaining the requirements necessary to achieve that long-term

Figure 1. Theory of Change



Source: The We Mean Business (WMB)

target; defining basic assumptions; selecting the interventions that lead to desired change; establishing indicators to measure the outcomes and the progress of the initiative; and explaining the logic of the initiative (ActKnowledge, 2012).

To implement the theory of change, the WMB offers twelve initiatives grouped into six categories that can be done voluntarily by companies joining the coalition. The first category is a net-zero emission initiative, which encourages companies to set the target to achieve carbon neutrality. This target needs to follow the Science-Based Targets initiative (SBTi) and Low Carbon Technology Partnerships initiative (LCTPi). The SBTi means the targets set by companies to reduce GHG emissions should in line with the latest climate science says to meet the Paris Agreement goals, that will help companies to keep on the track achieving a 2°C economy. Meanwhile, LCTPi is a program that supports companies to accelerate the development of low-carbon technology. The main goal of this program is to reduce GHG emissions in accordance with the Paris Agreement and Sustainable Development Goals (SDGs) through partnership and innovation.

The second category is creating a zero-carbon energy system. This category requires companies to build 100% renewable power and commit to smart energy use for a faster transition. These commitments provide companies for achieving energy security, cost savings, and growth concurrently. The third category is a zero-carbon transport system which focuses on sustainable fuels. The fuels must produce at least 50% less CO<sub>2</sub> emissions than conventional fossil fuels, known as below50, and an EV100 which is the development of the electric vehicle. The fourth category is the improvement of land by removing deforestation. This category includes the increase in the supply chain by eliminating commodity-driven deforestation, climate-smart agriculture practices, and the improvement of water security. The fifth category is the reduction of climate pollutants—methane, hydrofluorocarbons, black carbon, and tropospheric ozone, which is produced by the industrial sector. This category is crucial to create future industrial businesses that are more resilient to climate change and competitive, but less polluted. The last category is the enablers, such as carbon pricing, responsible climate policy, and climate change information reporting through the implementation of the Task Force on Climate-Related Financial Disclosures (TCFD), to build climate-competent companies. This emphasises on strengthening internal capacity in response to climate change in which businesses are encouraged to be more consistent, accountable, and transparent in climate change management practices.

### Research Gap

Despite increased awareness of corporate sustainability (Antolín-López, Delgado-Ceballos, & Montiel, 2016; Silva, Nuzum, & Schaltegger, 2019), and wide-knowledge of its importance (Silva et

al., 2019), there is still a limited number of empirical analysis regarding sustainable business models (SBM), which make corporations hard to develop their SBM (Evans et al., 2017). Besides, Bashir, Jørgensen, Pedersen, and Skard (2020) mention the need of business experiment model (BEM) to enable a transition to a more sustainable business model which requires a repetitive approach to create, experiment and analysis to overcome the barriers. The study has focused on experimentation for SBM, but it does not investigate the sustainability impact on the companies itself. Antolín-López et al., (2016) focus on corporate sustainability practice and the adoption drivers, but aspects such as sustainability performance measurement at the firm level remain under-explored. Therefore more research is needed in regards to business model contribution (Schaltegger, Hansen, & Lüdeke-Freund, 2016).

In the Indonesian context, studies about climate change are relatively limited (Resosudarmo, Ardiansyah, & Napitupulu, 2013). Several research in Indonesia mostly put attention on low carbon development from the government perspective in the national level, regional, and cities such as Bogor, Solo, Yogyakarta (Nakano, Budi, & Jaeger, 2017) and Palembang (Colenbrander, Gouldson, Sudmant, & Papargyropoulou, 2015). They emphasize that the climate actions are mostly small pilot projects with lack of coordination in the national or subnational level (Nakano et al., 2017), unclear roles among authorities (Resosudarmo et al., 2013), a lack of political will and institutional capacity or awareness (Colenbrander et al., 2015) and negative sentiment due to contradictory programs (Resosudarmo et al., 2013).

However, empirical analysis from the business perspective is very limited in Indonesia. There is a lack of research that analysed the business sector's commitment to tackling climate change, the impact for them, and the progress made during the fulfilment of climate mitigation. Therefore, this paper will include such investigation. This research aims to evaluate how the firm's commitment to sustainability under WMB initiatives to achieve a zero-carbon economy, risks and opportunities they face when fulfilling their commitments. Also, set up lesson learned strategies for Indonesian businesses to also contribute to tackling climate change.

## RESEARCH METHOD

As aforementioned, this study aims to analyse the companies' commitments under the WMB coalition and evaluates the progress, risks, and opportunities they have faced when fulfilling these tasks. Concerning the existing condition of the Indonesian business sector, this study is also expected to provide lessons learnt from companies around the world joining the WMB coalition. For analysis, a qualitative method through desk research was employed in which any documents related to the report of companies' commitment to climate change were

thoroughly interpreted. From the WMB website, 911 companies were joining the coalition in 2019 which were grouped into eleven sectors, such as consumer discretionary, consumer staples, energy, financials, health care, industrials, IT, materials, real estate, telecommunication services, and utilities. However, in this study, thirty-eight companies participating in the WMB from eleven sectors were selected based on the criteria in which at least three companies from each sector that have a minimum of three commitments as the sample (see Table 1). We used secondary data which were obtained from The Carbon Disclosure Project (CDP) and sustainability reports from each company for the period of 2014-2018 to interpret and analyse the risk and opportunities, commitment patterns, as well as the progress of the companies in achieving their commitments.

To forming and implementing the theory of change, there are several steps to conduct. First, recognise the problems or threat, point out the risks and opportunity, impact, and desired outcomes. Second, identify the actions, intervention and strategies to achieve the desired results. Third, carry out a link between the actions and the desired outcomes to create a robust measurement and evaluation. This step includes identifying actors that must be involved to create a synergy.

To evaluate a company's commitment progress, firms need to do self-assessment, which later will be assessed by the CDP. CDP will give a score based on the company's response in each question in the questionnaires, and the firms will be assessed across four levels described in Table 2. The scale indicates the company's steps of movement towards environmental goals.

First, the leadership level can be achieved if the businesses have gained high scores in the assessment and have disclosed specific actions that label them as leaders. Their responses have demonstrated an understanding of risks and opportunities related to climate change, and have integrated the mitigation in their business strategies through GHG emissions reduction target.

Second, companies can be awarded the management

**Table 1.** Selected Companies from the We Mean Business

Sector	Company List	Code	Sector	Company List	Code
Consumer discretionary	Woongjin Coway Co., Ltd.	WC	Information technology	Autodesk Inc.	AU
	H&M Hennes & Mauritz AB	HM		HP Inc.	HP
	RELX Group Plc	RE		Salesforce	SF
Consumer staples	Woolworths Holdings Ltd.	WH	Materials	Wipro	WP
	Diageo Plc	DI		Lafargeholcim Ltd.	LH
	Nestlé	NE		Dalmia Cement Ltd.	DC
Energy	Unilever Group	UG	Real Estate	Givaudan SA.	GV
	Origin Energy	OE		Daiwa House Industry Co. Ltd.	DH
	PTT Plc	PT		Daito Trust Construction Co., Ltd.	DT
Financials	Exxaro Resources Ltd.	ER	Telecommunication services	Dexus	DX
	Equinor	EQ		BT Group	BT
	National Australia Bank	NA		Koninklijke KPN NV	KK
Health care	AXA Group	AX	Utilities	Telefónica	TL
	BNP Paribas	BP		Acciona S.A. EDP	AC
	Landsec	LD		Naturgy Energy Group SA	NG
Industrials	Koninklijke DSM	KD	Suez	SU	
	GlaxoSmithKline (GSK)	GS	Veolia	VE	
	AstraZeneca	AZ			
	Schneider Electric (SE)	SE			
	Ferrovial	FR			
	Koninklijke Philips NV	KP			

Source: The We Mean Business (WMB)

level if they provide evidence of actions associated with proper environmental management under CDP criteria. Companies have to show awareness of how climate change issues impact their business and decide which actions to reduce its side effects. These actions can be made through risk mitigation and assessments, executing sustainable policy, and integrate climate issues into business strategies.

Third, the awareness level indicates that the companies have aware of how environmental issues intersect with its business and vice versa but have not to take any actions to address it. The awareness score measures the comprehensiveness of companies' evaluation of how environmental issues impact their operations.

Fourth, the disclosure level is the lowest scoring of assessment. In this regards, companies only disclose their business impacts on the environment and natural resources and have not showed awareness of climate change implication to their businesses. Meanwhile, the companies that are requested to disclose their data but fail to provide sufficient information to CDP for evaluation will receive an F score. Even so, an F does not represent a failure in environmental management.

## RESULT AND DISCUSSION

### WMB Coalition and Commitment Pattern

As a non-profit coalition, the WMB attracted 911 companies in 2019 to participate in GHG emissions reduction through twelve initiatives (see Table 3). Among eleven sectors, science-based targets initiative (SBTi) is the most popular commitment that the corporations stick to, as can be seen in Table 3. Even though not all companies' target has been approved as science-based by the Science-Based Targets initiatives, the companies still consider SBTi when they set the goal. SBTi is aligned with the objectives of the Paris Agreement in which it provides a clear pathway for a company to achieve future business growth while remaining global warming below the 2°C limit. The target set by the company is ambitious, and it must be consistent with reducing emission each year. This target may attract investor since it gives greater

**Table 2.** The Assessment Results of Climate Change Reporting

Score Band	Level	Description
A and A-	Leadership	Companies demonstrating climate strategic best practice
B and B-	Management	Companies taking climate action
C and C-	Awareness	Companies with an understanding of climate impacts
D and D-	Disclosure	Companies starting a climate disclosure
F*	Failure	Companies failed to provide sufficient information to be evaluated

Notes: \*extra level

Source: The We Mean Business (WMB)

visibility and assurance of the company's objectives, and thus improving access to capital.

Furthermore, SBTi may drive transformative changes and encourage innovation in the form of environmentally friendly products, technologies, and services. By committing to SBTi, the firms not only save future profitability but also gain a competitive advantage in the markets. Besides, the company with approved SBTi are required to issue an annual emission report which may give a benefit of transparency and good reputation.

Meanwhile, sustainable fuel is the least popular commitment because most companies may not have a significant number of cars, and thus, sustainable fuels obligation may not be relevant to them. To join this initiative, the company need to produce, use or invest in fuels that are at least 50% less carbon emission than conventional fossil fuels. Under this scheme, the company need to demonstrate a real commitment to sustainable fuels with evidence of steps taken to achieve it.

Moreover, each sector seems to have its commitment pattern. For example, most of the firms under the consumer discretionary, consumer staples, financials, and industrials sector are committed to apply SBTi, renewable power, remove deforestation, carbon pricing, responsible climate policy, and report climate change information. Meanwhile, companies in the utility industry mostly apply SBTi, carbon pricing, responsible climate policy, report climate change information and improve water security.

Table 4 shows the assessment results released by the Carbon Disclosure Project (CDP). It can be seen that most of the sample companies were graded "-A or A" for several years, and this demonstrates an ambitious level of commitment to tackling climate change. The company that is scored "-A/ A" can be categorised as the leader in mitigating climate change. There are some indicators that need to be fulfilled to be eligible for a leadership level. Companies need to provide incentives and disclose the mechanism used to monitor climate-related issues. Moreover, they also need to identifying and assessing climate-related risks and opportunities more than once in a year and covered short, medium, and long-term time horizon, as well as describing the impact to business strategies and financial planning. The companies also need to consider climate scenario analysis in setting up company's strategies; provide details of emissions reduction goals and the progress achieved; disclosing

the source of scope 1,2,3 emissions; and identify some initiatives and CO<sub>2</sub>e savings estimation (CDP, 2019b).

In oppose to this, some companies are laggards compared to others in its sector, such as Origin Energy and PTT under the energy sector; and Koninklijke DSM before 2016 under the health care industry. Origin energy got C and D score during the five periods, which marks it only as disclosure and awareness level. Meanwhile, PTT Plc and Koninklijke DSM were graded C before 2016, which demonstrate an awareness level, although after that the level improved. Their score in the CDP Report was not as good as their competitors in the same industry. If we compare among the sector, energy and real estate have the lowest score in the CDP Report.

### Progress Made Regarding the Commitment

According to CDP Climate Change and Sustainability Report of all sample companies, most of the companies in eleven sectors under the WMB initiative have shown good progress in achieving their commitment toward climate issues (see Table 5). By applying for sustainable programs, the companies cannot only generate a high return but also create better future growth for the business as well as their stakeholders.

Most companies are multinational in which they are exposed to different rules and jurisdictions; thus, they must adopt different climate policies. Companies are ambitious to set the target to reduce emissions, but mostly what they have done is close to the target, meaning that they are on track achieving the Paris Agreement. To achieve the target, companies implemented various initiatives aligned with their commitment, according to WMB's climate action typology. From their climate reports, as illustrated in Table 5, most companies' actions have been in line with the SBTi. To get the SBTi approval, companies must take actions based on the latest climate science says. In other words, companies should be responsive and adaptable to climate challenges and make transformative changes to meet the climate pledge.

Although some companies have not been approved as a science-based regarding their climate actions, they have created a zero-carbon energy system. Based on their CDP reports, they commit to either build or purchase 100% renewable energy power to reduce their emissions. In this regard, some companies built wind power and biomass facilities and installed solar photovoltaics to generate electricity, and others

purchased from utility companies that provide clean energy. Companies also improve their energy efficiency by changing HVAC, lighting, building control, and replace their old machineries. Efficiency has become a top priority not only for energy use but also for water use as performed by companies that are engaged in water-intensive activities. Products and services offered by companies are redesigned to meet environmental standards aligning with consumers' expectation. These actions include transforming a supply chain system that can minimise environmental degradation. In terms of transportation, some companies have started to improve their transportation fleets by using electric vehicles and changing fossil fuels into less carbon-intensive fuels. Besides, companies encourage their employee to reduce business travels so that they can minimise both travel and carbon costs.

Furthermore, in terms of climate pollutants reductions, companies engaged in manufacturing replaced their old facilities not only for saving energy but also reducing pollution. This action involves technology transformation that might be costly at the beginning as it leads to assets stranding. Yet, along with a decline in renewable energy costs and the concept of carbon lock-in, the transformation provides more benefits

to companies in the future. Last, since companies regularly submit and publish their sustainability report for their stakeholders through the Carbon Disclosure Project or their website, this indicates that companies are transparent and accountable in climate management practices. Besides, companies have shown their climate responsibility as recommended by the Task Force on Climate-Related Financial Disclosures (TCFD).

**Risks and Opportunities**

In pursuing the commitments, it cannot be denied that all companies faced several risks and opportunities. For risks, there are some aspects in regards to regulations, changes in business operations, and supply chain that sometimes become an obstacle in implementing the firm's commitment. Companies need to consider potential regulatory risk, especially for the one that has manufacturing sites spread around the globe, which are influenced by the host country's climate policy. According to Eljido-Ten (2017), regulatory risk has a negative correlation with sustainability performance. According to Finke et al. (2016), businesses may fail to respond to climate change due to limited interaction among the stakeholders,

Table 3. The Commitment Pattern of the Selected Companies

Code	Actions											
	Net Zero		Energy		Urban		Land	Industrial	Carbon Pricing	Enablers Climate Policy	Climate Report	Resilience Water security
	SBTi	LCTPi	RE100	EP100	below50	EV100	Deforestation	SLCPs				
WC	✓		✓				✓		✓	✓	✓	
HM	✓			✓			✓		✓	✓	✓	
RE	✓		✓				✓		✓	✓	✓	
WH	✓			✓			✓		✓	✓	✓	
DI	✓	✓	✓				✓	✓		✓	✓	✓
NE	✓	✓	✓				✓	✓		✓	✓	
UG	✓	✓	✓			✓	✓		✓	✓	✓	
OE	✓		✓				✓	✓		✓	✓	
PT							✓	✓		✓	✓	
ER	✓						✓	✓		✓	✓	
EQ		✓					✓	✓		✓	✓	
NA	✓		✓				✓	✓		✓	✓	
AX	✓		✓				✓	✓		✓	✓	
BP	✓		✓				✓	✓		✓	✓	
LD	✓		✓	✓			✓	✓		✓	✓	
KD		✓	✓				✓	✓	✓	✓	✓	
GS	✓		✓				✓	✓		✓	✓	✓
AZ	✓		✓				✓	✓		✓	✓	✓
SE	✓	✓	✓	✓			✓	✓		✓	✓	
FR	✓		✓				✓	✓		✓	✓	
KP	✓		✓				✓	✓		✓	✓	
AU	✓		✓				✓	✓		✓	✓	
HP	✓		✓			✓	✓	✓		✓	✓	
SF	✓		✓	✓			✓	✓		✓	✓	✓
WP	✓		✓			✓	✓	✓		✓	✓	
LH		✓	✓				✓	✓	✓	✓	✓	
DC	✓	✓	✓	✓			✓	✓		✓	✓	
GV	✓		✓				✓	✓		✓	✓	
DH	✓		✓	✓			✓	✓		✓	✓	
DT	✓		✓				✓	✓		✓	✓	
DX	✓		✓	✓			✓	✓		✓	✓	
BT	✓	✓	✓			✓	✓	✓		✓	✓	
KK	✓		✓				✓	✓		✓	✓	
TL	✓		✓				✓	✓		✓	✓	
AC	✓	✓	✓				✓	✓		✓	✓	
NG	✓		✓				✓	✓		✓	✓	✓
SU	✓		✓				✓	✓		✓	✓	✓
VE	✓		✓				✓	✓	✓	✓	✓	✓

Source: The We Mean Business (WMB)



**Table 4.** The Assessment Results of Climate Change Reporting

Sector	Company List	CDP Report Result
Consumer discretionary	Wongjin Coway Co., Ltd.	2018: A-; 2017: A-; 2016: A-; 2015: A; 2014: A-
	H&M Hennes & Mauritz AB	2018: A-; 2017: A-; 2016: A-; 2015: B; 2014: A
	RELX Group Plc	2018: A; 2017: A-; 2016: A; 2015: B; 2014: A
Consumer staples	Woolworths Holdings Ltd.	2018: B; 2017: B; 2016: B; 2015: B; 2014: B
	Diageo Plc	2018: A; 2017: A; 2016: A; 2015: A; 2014: A
	Nestlé	2018: A; 2017: A; 2016: A; 2015: A; 2014: A-
Energy	Unilever Group	2018: A; 2017: A; 2016: A; 2015: A; 2014: A
	Origin Energy	2018: D; 2017: C; 2016: B; 2015: D; 2014: C
	PTT Plc	2018: C; 2017: B; 2016: B; 2015: C; 2014: C
Financials	Exxaro Resources Ltd.	2018: B; 2017: B; 2016: B; 2015: B; 2014: B
	Equinor	2018: -A; 2017: -A; 2016: -A; 2015: B; 2014: C
	National Australia Bank	2018: B; 2017: A-; 2016: A; 2015: A-; 2014: A
Health care	AXA Group	2018: A-; 2017: A-; 2016: B; 2015: B; 2014: A-
	BNP Paribas	2018: A-; 2017: A-; 2016: A-; 2015: A-; 2014: A-
	Landsec	2018: A; 2017: A; 2016: A-; 2015: C; 2014: A
Industrials	Koninklijke DSM	2018: A-; 2017: A; 2016: A; 2015: C; 2014: C
	GlaxoSmithKline (GSK)	2018: B; 2017: A-; 2016: A; 2015: B; 2014: B
	AstraZeneca	2018: A; 2017: A; 2016: A; 2015: B; 2014: A
Information technology	Schneider Electric (SE)	2018: A; 2017: A; 2016: A; 2015: A; 2014: A
	Ferrovial	2018: A; 2017: A-; 2016: A; 2015: A; 2014: A
	Koninklijke Philips NV	2018: A; 2017: A; 2016: A; 2015: A; 2014: A
Materials	Aurelisk Inc.	2018: C; 2017: A-; 2016: A; 2015: A; 2014: A
	HP Inc.	2016: A; 2015: A; 2014: A
	Salesforce	2018: A; 2017: B; 2016: A-; 2015: B; 2014: C
Real Estate	Wipac	2018: A-; 2017: B; 2016: A; 2015: A; 2014: A
	LafargeHolcim Ltd.	2018: B; 2017: A-; 2016: A-; 2015: B; 2014: B
	Dalmia Cement Ltd.	2018: B; 2017: -; 2016: B; 2015: -
Telecommunication services	Grauband SA	2018: -A; 2017: A; 2016: A-; 2015: A; 2014: B
	Daiwa House Industry Co. Ltd.	2018: A; 2017: A-; 2016: A-; 2015: B; 2014: A
	Daito Trust Construction Co., Ltd.	2018: B; 2017: A-; 2016: A; 2015: B; 2014: C
Utilities	Dexu	2018: -A; 2017: -A; 2016: A; 2015: A; 2014: A
	BT Group	2018: A; 2017: A; 2016: A; 2015: B; 2014: A
	Koninklijke KPN NV	2018: A-; 2017: A; 2016: A; 2015: B; 2014: A
Utilities	Telefonica	2018: A; 2017: A; 2016: A; 2015: A; 2014: A
	Acciona S.A. EDP	2018: -A; 2017: A; 2016: A; 2015: A; 2014: A
	Naturgy Energy Group SA	2018: A; 2017: -A; 2016: A; 2015: -A; 2014: A
Utilities	Suez	2018: A; 2017: A; 2016: A; 2015: B; 2014: B
	Veolia	2018: -A; 2017: -A; 2016: A; 2015: B; 2014: B

Source: CDP (Carbon Disclosure Project), 2019

so collective actions are needed to achieve the target successfully. Moreover, the company may also face price risk and supply risk when they should offer specific products and services that meet green standards but, in a country, where the sustainable government policy is weak. To secure their supply of environmental products, raising the awareness and information among suppliers is also needed, which may increase the promotion budget.

Moreover, implementing commitments can also be risky for companies in terms of financing. For illustration, SBTi is considered to be a risky investment, since it needs a substantial amount to be executed. If the company fail to demonstrate SBTi and does not meet the target, they may suffer losses both financial and reputation, which makes the firm value undermined. Another potential risk that may arise is related to green credentials in which there is a possibility of green products demand to shrink due to saturated markets or changes in customer behaviour.

However, pursuing sustainable commitment also brings several opportunities for businesses. The need for tackling climate change requires companies to be more innovative in terms of products and services, which means that climate change mitigation provides new business opportunities (Lazaro et al., 2018), and differentiate products (Walsh & Dodds, 2017) that lead to more added value (Latan et al., 2018). As people are more aware of the impact of climate change, the firms' commitment in reducing their carbon footprint may create an opportunity to develop various eco-friendly products and services that can attract a broader range of consumers. The business model that refers to circular economy innovations

will also build customer trust since the company will focus on customer intimacy and loyalty. By doing this, companies are expecting to save costs, enhance sales (Schultz et al., 2005) and drive higher revenues. Such strategies can create a sustainable competitive advantage that can lead to the improvement of business performance (Elijido-Ten, 2017).

Furthermore, sustainable commitment can also make firms gain a good reputation. Reporting GHG emissions can meet public expectations and maintain corporate legitimacy (Hrasky, 2011), as well as satisfy stakeholder informational needs (Liesen et al., 2015). Most sampled companies have been known as the leader because of their commitments to be an eco-friendly business. According to the Carbon Disclosure Project (2016), companies that are actively engaged in climate change outperformed compared to non-committed peers.

Also, climate-related issues such as the rising temperature, water shortage and pollution, as well as natural disasters, may be a threat to the firm's assets and business activities. If the scarcity of some raw materials due to climate change happens, it may significantly increase the costs of products bought from suppliers. Therefore, implementing commitment becomes urgent for companies. If the firms consider these climate-related issues and integrate it into their business strategies, they will likely to reap the benefit of the commitment in the future. Latan et al., (2018) argue that a climate-related strategy not only aims to reduce environmental damage but also to achieve sustainable environmental performance in the future.

### Lessons Learnt for Indonesian Businesses

Indonesia is one of the biggest emitters in the world with substantial emissions from forestry, a massive coal-fired power generation pipeline, and increasing emissions in all sectors, where all leads to vulnerability to climate change. The impact of climate change cannot be ignored; thus, serious actions must be taken by the Indonesian government. Under the Paris agreement, Indonesia has committed to reducing 29% of GHG emissions including land, land-use change and forestry (LULUCF) below BAU emissions by 2030 and a conditional target up to 41% reductions with international support including technology and finance. To achieve this target, the government has released the Nationally Determined Contribution (NDC) and committed to reform its energy sector. The government will improve the energy mix where the share of renewable energy is expected to increase to 23% by 2025.

The current policy of Indonesia to tackle climate change has also been comprehensive from the economic aspect, energy supply, industry, transport, building, agriculture, and forestry sides. Since most of the Indonesian emission comes from the forest sector, much of Indonesia's climate policy is directed to solve this issue. For example, a moratorium on the draining of peatlands, three years moratorium on new permits for palm plantations, conservation

of the rainforest, as well as green climate fund for REDD+. Besides, the Indonesia government also sets a target of energy efficiency through the Master Plan for Energy Conservation (RIKEN) to decrease energy intensity by 1% annually until 2025. These are what the Indonesian government has been doing to address climate change. Concerning this, what are the private sector's contributions to reducing emissions?.

It cannot be denied that the private sector plays a significant role in contributing to GHG emissions. Fossil fuel companies, for instance, produce high-intensive carbon that leads to an increase in CO<sub>2</sub> concentration in the atmosphere. Other companies consume fossil fuel considerably to support their business activities. Besides, the development of renewables is limited as it requires significant investment. Along with this, the role of the private sector is needed to support the government addressing climate change. In this regard, businesses can improve their energy consumption and contribute to the development of renewables with a specific scale depending on the level of energy need. Moreover, such actions can be identified in the company's sustainability report; thus, as a medium to provide information to its stakeholders that the company commits to tackle climate change, the sustainability report plays a critical role.

Although joining sustainable initiatives and reporting sustainable report can improve firm value, not many Indonesian companies are eager to do so (Rahayu, 2018). Several giant companies provide information related to climate actions, but the report has not been comprehensive. Bank Mandiri, the biggest bank in Indonesia, for example, although the bank reported its sustainable activities, in the environment section, particularly emissions, Bank Mandiri had not provided detail information related GHG emissions including the target, the progress made, initiatives, and even the division of Scope 1, 2, and 3 emissions. In the CDP Climate Change Report, most of the Indonesian companies were failed to report their commitment and scored as F, which means the lowest score. It can also be seen that only two Indonesian businesses have committed the WMB Coalition and a limited number in other initiatives. Besides, the Global Reporting Initiative (GRI) recorded 22 Indonesian companies submitting a sustainability report. This situation shows that Indonesian companies seem to pay less attention to the issue of sustainability, even though publishing the report is voluntary.

Based on companies joining the WMB, they have experienced to minimise reputational risks in which through their sustainability report, they can show their commitment to climate change to the stakeholders. In relation to this, Indonesian companies must learn how companies proactively respond to climate change and work collectively with stakeholders in reducing emissions. Besides, Indonesian businesses can adopt WMB initiatives to help the government in shaping climate policies. For example, most companies joining WMB commit to Science-Based Target Initiative (SBTi) that focus on the reduction of GHG

emissions aligning with the latest climate science. In other words, SBTi encourages companies to make transformative changes and be innovative in the form of environmentally products, services, and technologies. Companies need a forward-looking approach to run the business aligning with the Paris Agreement. Therefore, the government's target to reduce emissions up to a certain level can be achieved.

Even addressing climate change is high costs, but beyond that, businesses can take advantages to increase profits and move towards a sustainable business that will create a better world. Besides, companies need to consider climate-related risks that would affect their business. In other words, taking climate actions can help companies to mitigate and adapt to climate change. Like companies that have joined WMB, they have a strong commitment to helping the world in accelerating the transition to a low carbon economy. The companies provide their climate report clearly and show the progress that they have made. The companies are also likely to have a better competitive advantage and succeeded to create new products and services as climate change offers not only risks but also opportunities for the new market.

Indonesian companies can take lessons learnt on how the private sector should do to address climate change. WMB initiatives taken by companies drive to the efforts to meet the climate pledge. The business sector can start to consider climate actions by saving energy and using renewables to generate electricity. These actions should be embedded in the corporate strategy, and companies are expected to reduce their emissions so that the emission pathway can be consistent with climate goals. Besides, Indonesian companies should realise the real impact of climate change on their business. To be successful in developing climate strategies, companies have to go beyond top management commitment, integrating climate risk management into company's business activities as well as setting up emissions reduction target (CDP, 2018; Eleftheriadis & Anagnostopoulou, 2017).

These findings support the argument from (Spencer & Adams, 2013) that companies who are environmentally friendly mostly have strong top management, which may generate a competitive advantage. Latan et al., (2018) also describe that to become a global leader in terms of environmental performance, a commitment of top management and integrating environmental issues in corporate strategy are needed.

Furthermore, climate change is a critical issue that requires all stakeholders to working together. Evans et al. (2017) argue that the success of sustainable progress measurement needs collaboration with the entire set of shareholders, not just a single shareholder. Dentoni, Waddell, and Waddock, (2017) also point out that to foster transformation, requires coherence among all parties, including agents of change, i.e. head of organizations, stakeholders, and research institutes; and supporting actors. Businesses should not highly rely on the government to reduce emissions; they need to contribute to emissions reductions.

However, supports from the government are also needed to encourage the private sector taking part in climate actions. For example, the government can provide incentives to companies that are willing to implement new technologies and methods for addressing climate change. Like in Australia, the government, through the Emissions Reduction Fund (ERF), invites companies to commit to reducing their emissions. Moreover, carbon pricing policies can also lead firms committing to taking actions on climate change and discouraging them from producing more carbon footprint.

Following this, OJK also encourages companies to adopt sustainability in their business activities. Sustainability has become a climate challenge for companies as financial institutions have considered this issue into their credit assessment. In this regard, companies that show excellent performance in term of ESG criteria are more likely to have better financing opportunities. However, strong commitment needs to be taken into account. Learning from WMB initiatives can enhance Indonesian companies' commitment to climate change, and the transition to a low-carbon economy can be achieved. Besides, for companies, they would be less likely to be affected by climate-related risks as taking initiatives can make companies more adaptable to the future climate challenges aligning the concept of "lock-in". Therefore, companies become more sustainable and can support the government to meet the ambition in reducing emissions.

## CONCLUSION

Among eleven sectors under WMB coalition, science-based targets initiative (SBTi) is the most popular commitment that businesses stick to tackle climate change and sustainable fuels are the least favourable initiatives. The sampled firms have a high level of ambition in tackling climate change by committing to at least two initiatives under WMB coalition. Even some companies are laggard in terms of their commitment progress, but mostly what they have done is close to their target of emissions reduction, meaning that they are on track achieving the Paris Agreement.

Even though companies face risks, such as changes in regulatory, business operation, consumer behaviour, and supply chain in pursuing their commitment, these risks are also widening their opportunities to gain reputation, develop new products, save cost, and boost revenue. Besides providing a high profit, more proactive in dealing with climate change issues has resulted in a more sustainable future growth for the businesses under WMB initiatives. This support the findings from Boiral, Henri, and Talbot (2012) which argue that climate initiatives may provide an environment and social benefit to businesses.

Meanwhile, awareness of environmental commitments has not been reflected in Indonesian businesses. Although the Indonesian government has set a comprehensive policy and target to reduce GHG emissions

in several sectors, and OJK has released regulation about the sustainable finance which requires companies to submit their sustainability report, most companies have not fulfilled this obligation and considered the importance of this disclosure.

Since only two Indonesian companies that have joined the WMB Coalition, Indonesian business entities should be more active to accelerate a low-carbon transition. The impact of joining sustainable commitments for sampled companies can be lessons learnt for Indonesian companies to implement the same policy to reduce their GHG emissions. Indonesian businesses should be more aware of climate-related risks for their business and integrate them into the company's strategy to reap the benefit of their commitments. To be successful in implementing the strategy, businesses also need strong leadership and strong management commitment regarding sustainability.

Also, to increase compliance of the Indonesian corporations, the government should take a more mandatory policy for businesses to disclose their carbon footprint and take action in reducing it through carbon pricing. The government can also provide incentives to companies that are willing to implement new technologies and methods for addressing climate change. This is because the private sector is expected to contribute more to reducing emissions as combating climate change requires a strong commitment from all parties, not only the government. As one of the world's largest emitters, Indonesia needs to take more severe actions to address climate change issues; therefore, Indonesia can achieve its target under the Paris agreement.

This study uses a descriptive explanation through desk research. A limitation of this research is that we rely heavily on WMB, CDP, and company's report to track firms progress in achieving its climate commitment. Future studies could be conducted using other qualitative methods such as an in-depth interview or focus group study with Indonesian businesses to get more understanding of their problems in committing to sustainability and environmental issues. Besides, future research can also elaborate other sustainable commitments outside WMB initiatives or in other countries to give more comprehensive result in different contexts and cultures.

## REFERENCES

- ActKnowledge, I. (2012). *Theory of Change Basics: A Primer on Theory of Change*.
- Antolín-López, R., Delgado-Ceballos, J., & Montiel, I. (2016). Deconstructing corporate sustainability: a comparison of different stakeholder metrics. *Journal of Cleaner Production* 136, 5–17. <https://doi.org/10.1016/j.jclepro.2016.01.111>
- Bappenas. (2010). *Rencana Aksi Nasional Penurunan Emisi Gas Rumah Kaca*.
- Bashir, H., Jørgensen, S., Pedersen, L. J. T., & Skard, S. (2020). Experimenting with sustainable business models in fast moving consumer goods. *Journal*

- of *Cleaner Production*, 270, 122302. <https://doi.org/10.1016/j.jclepro.2020.122302>
- Boiral, O., Henri, J. F., & Talbot, D. (2012). Modeling the Impacts of Corporate Commitment on Climate Change. *Business Strategy and the Environment* 21(8), 495–516. <https://doi.org/10.1002/bse.723>
- CDP. (2018). *Global Climate Analysis 2018*. CDP Report.
- CDP (Carbon Disclosure project). (2018). *Introduction to Scoring 2018*.
- CDP (Carbon Disclosure Project). (2016). *CDP Climate Change Report 2016 - France & Benelux* edition. October, 1–64.
- CDP (Carbon Disclosure Project).(2019a). *Carbon Disclosure Project (CDP)*.
- CDP (Carbon Disclosure Project). (2019). *CDP Climate Change 2019 Scoring Methodology*.
- Colenbrander, S., Gouldson, A., Sudmant, A. H., & Papargyropoulou, E. (2015). The economic case for low-carbon development in rapidly growing developing world cities: A case study of Palembang, Indonesia. *Energy Policy* 80, 24–35. <https://doi.org/10.1016/j.enpol.2015.01.020>
- Comyns, B. (2018). Climate change reporting and multinational companies: Insights from institutional theory and international business. *Accounting Forum* 42(1), 65–77. <https://doi.org/10.1016/j.accfor.2017.07.003>
- Dyllick, T., & Hockerts, K. (2002). Beyond the business case for corporate sustainability. *Business Strategy and the Environment* 11(2), 130–141. <https://doi.org/10.1002/bse.323>
- Dyllick, T., & Muff, K. (2016). Clarifying the meaning of sustainable business: Introducing a typology from business-as-usual to true business sustainability. *Organization & Environment* 29(2), 156–174. <https://doi.org/10.1177/1086026615575176>
- Eleftheriadis, I., & Anagnostopoulou, E. (2017). Measuring the level of corporate commitment regarding climate change strategies. *International Journal of Climate Change Strategies and Management* 9(5), 626–644. <https://doi.org/10.1108/IJCCSM-09-2016-0145>
- Elijido-Ten, E. O. (2017). Does recognition of climate change related risks and opportunities determine sustainability performance?. *Journal of Cleaner Production*. <https://doi.org/10.1016/j.jclepro.2016.09.136>
- Evans, S., Vladimirova, D., Holgado, M., Fossen, K. Van, Yang, M., Silva, E. A., & Barlow, C. Y. (2017). *Business Model Innovation for Sustainability: Towards a Unified Perspective for Creation of Sustainable Business Models*. <https://doi.org/10.1002/bse.1939>
- Finke, T., Gilchrist, A., & Mouzas, S. (2016). Why companies fail to respond to climate change: Collective inaction as an outcome of barriers to interaction. *Industrial Marketing Management* 58, 94–101. <https://doi.org/10.1016/j.indmarman.2016.05.018>
- Heikkurinen, P., Young, C. W., & Morgan, E. (2019). Business for sustainable change: Extending eco-efficiency and eco-sufficiency strategies to consumers. *Journal of Cleaner Production* 218, 656–664. <https://doi.org/10.1016/j.jclepro.2019.02.053>
- Hickmann, T. (2017). Voluntary global business initiatives and the international climate negotiations: A case study of the Greenhouse Gas Protocol. *Journal of Cleaner Production* 169, 94–104. <https://doi.org/10.1016/j.jclepro.2017.06.183>
- Hormio, S. (2017). Can corporations have (moral) responsibility regarding climate change mitigation? *Ethics, Policy and Environment* 20(3), 314–332. <https://doi.org/10.1080/21550085.2017.1374015>
- Hrasky, S. (2011). Carbon footprints and legitimization strategies: symbolism or action. *Accounting, Auditing & Accountability* 25(1), 174–198. <https://doi.org/https://doi.org/10.1108/09513571211191798>
- OJK Regulation No. 51/POJK.03/2017 .*Concerning Application of Sustainable Finance to Financial Services Institution, Issuer and Publicly Listed Companies*. (2017) (testimony of Indonesia Financial Services Authority [OJK]).
- Jones, A. W., & Phillips, A. (2016). Voluntary business engagement in climate change: A study of the ClimateWise principles. *Journal of Cleaner Production* 137, 131–143. <https://doi.org/10.1016/j.jclepro.2016.07.064>
- Latan, H., Chiappetta Jabbour, C. J., Lopes de Sousa Jabbour, A. B., Wamba, S. F., & Shahbaz, M. (2018). Effects of environmental strategy, environmental uncertainty and top management's commitment on corporate environmental performance: The role of environmental management accounting. *Journal of Cleaner Production* 180, 297–306. <https://doi.org/10.1016/j.jclepro.2018.01.106>
- Lazaro, L. L. B., Gremaud, P. A., & Benites, L. A. (2018). Business responsibility regarding climate change in Latin America: An empirical analysis from Clean Development Mechanism (CDM) project developers. *The Extractive Industries and Society* 5(2), 297–306. <https://doi.org/10.1016/j.exis.2018.02.011>
- Lei, L., Voss, H., Clegg, L. J., & Wu, X. (2017). Climate change strategies of multinational enterprises in China. *Journal of Cleaner Production* 160, 98–108. <https://doi.org/10.1016/j.jclepro.2017.03.150>
- Liesen, A., Hoepner, A. G., Patten, D. M., & Figue, F. (2015). Does stakeholders pressure influence corporate GHG emissions reporting? Empirical evidence from Europe. *Accounting, Auditing & Accountability* 28(7), 1047–1074. <https://doi.org/https://doi.org/10.1108/AAAJ-12-2013-1547>
- Majalah CSR. (2017). *Sustainability Report (SR) di Indonesia Sepi Peminat*. Majalah CSR. <https://majalahcsr.id/sustainability-report-sr-di-indonesia-sepi-peminat/>
- Ministry of National Development Planning [Bappenas]. (2019). *Low-carbon development:*

- A paradigm shift towards a green economy in Indonesia.* <https://drive.bappenas.go.id/owncloud/index.php/s/ZgLfHeVguMi8rG#pdfviewer>
- Nakano, R., Budi, S., & Jaeger, A. (2017). Low Carbon Governance in Indonesia and India : A Comparative Analysis with Recommendations. *Procedia Engineering* 198 (September 2016), 570–588. <https://doi.org/10.1016/j.proeng.2017.07.112>
- Nan, S. A. (2010). *Theories of Change and Indicator Development in Conflict Management and Mitigation* (Issue June).
- Okereke, C., Wittneben, B., & Bowen, F. (2012). Climate change: Challenging business, transforming politics. *Business & Society* 51(1), 7–30. <https://doi.org/10.1177/0007650311427659>
- Rahayu, E. M. (2018). *Meningkatkan Nilai Perusahaan dengan Sustainability Reporting*. SWA.
- Resosudarmo, B. P., Ardiansyah, F., & Napitupulu, L. (2013). The Dynamics of Climate Change Governance in Indonesia. In D. Held, C. Roger, & E.-M. Nag (Eds.), *Climate Governance in the Developing World*, 72–90. Cambridge: Polity Press.
- Sakhel, A. (2017). Corporate climate risk management: Are European companies prepared? *Journal of Cleaner Production* 165, 103–118. <https://doi.org/10.1016/j.jclepro.2017.07.056>
- Schaltegger, S., Hansen, E. G., & Lüdeke-Freund, F. (2016). Business Models for Sustainability: Origins, Present Research, and Future Avenues. *Organization and Environment* 29(1), 3–10. <https://doi.org/10.1177/1086026615599806>
- Schultz, K., Kingdom, U., & Williamson, P. (2005). Gaining Competitive Advantage in a Carbon- constrained World : Strategies for European Business. *European Management Journal* 23(4), 383–391. <https://doi.org/10.1016/j.emj.2005.06.010>
- Silva, S., Nuzum, A. K., & Schaltegger, S. (2019). Stakeholder expectations on sustainability performance measurement and assessment. A systematic literature review. *Journal of Cleaner Production* 217, 204–215. <https://doi.org/10.1016/j.jclepro.2019.01.203>
- Spencer, S. Y., & Adams, C. (2013). The mediating effects of the adoption of an environmental information system on top management 's commitment and environmental performance. *Sustainability Accounting, Management and Policy Journal* 4(1), 75–102. <https://doi.org/10.1108/SAMPJ-10-2011-0030>
- UNFCCC. (2015). *Adoption of the Paris Agreement. Proposal by the President Draft Decision: CP.21.* <https://unfccc.int/resource/docs/2015/cop21/eng/109r01.pdf>.
- Wakabayashi, M. (2013). Voluntary business activities to mitigate climate change: Case studies in Japan. *Energy Policy* 63, 1086–1090. <https://doi.org/10.1016/j.enpol.2013.08.027>
- Walsh, P. R., & Dodds, R. (2017). Measuring the Choice of Environmental Sustainability Strategies in Creating a Competitive Advantage. *Business Strategy and Environment* 687(April), 672–687. <https://doi.org/10.1002/bse.1949>
- We Mean Business [WMB]. (2019). *Companies - We Mean Business coalition.* <https://www.wemeanbusinesscoalition.org/companies/#country=Indonesia>
- WMB. (2019). *What We Do - We Mean Business coalition.* We Mean Business.

APPENDIX

Appendix 1 (Table 5). The Companies Commitment Progress

Sector	Company Name	Commitment Progress
Consumer discretionary	Woolgatin Coway Co. Ltd.	From the Scope 1 + 2, Coway has set the target to reduce GHG emissions by 1% by 2020 compared with 2010. In 2017, it achieved 70% of its target. Besides to address Scope 3, Coway encourages its vendors who join Coway's Carbon Partnership to reduce their GHG emissions. To support this, Coway continues to do programs, such as diagnosing energy, assisting for a reducing system, and quantifying energy device to help vendors achieving their goals. In 2018, Coway achieved 90% of the target. H&M has committed to reduce 35% of GHG emissions from Scope 1 & 2 by 2020 compared to 2014 under a science-based target. With more than 400 stores, H&M focuses on energy efficiency and securing renewable energy. In 2017, H&M reached 90% renewable electricity and reduced emissions by 21% or 70% of its target. By focusing on energy efficiency and engaging with suppliers and customers, RELX Group succeeded in achieving more than 100% of its target. RELX also considered a science-based target to reduce its emissions. Woolworths has intended to replace synthetic refrigerants by natural refrigerants, introduce LED lighting across all refrigerated showcases, improve refrigeration and air-conditioning plans, and implement a sustainable supply chain. Also, Woolworths sets the target of zero food waste and the use of solar power generation. Woolworths reduced 13% of emissions below 2015 levels.
	H&M Hennes & Mauritz AB	
	RELX Group Plc	
	Woolworths Holdings Ltd.	
	Diageo Plc	To address Scope 1, Diageo implemented low-carbon energy installations that focused on biomass, biogas, and energy efficiency products in which Diageo's projects included boiler replacement, heat recovery, and optimisation of processes. Also, renewable energy was produced using solar. Diageo has received a science-based target approval. As a result, Diageo reached 81% of the Scope 1 & 2 target and 74% of the Scope 3 target. Initiatives implemented by Nestlé included energy efficiency (water-saving), low-carbon purchase (as a member of RE100), Nestlé needs to secure 100% of its electricity from renewables, and final conversion for transportation. Finally, Nestlé has achieved the satisfying target of reducing emissions for Scope 1 & 2. Two main initiatives were conducted to reduce emissions by 2030, such as reducing energy consumption and use of 100% renewables for all residual energy requirements (RE100 compliance). Unilever's target has been approved by the Science-Based Target Initiative. In 2017, Unilever reduced emissions by 5.8% (absolute scope 1 + 2) with 7.3% of Scope 1 and 4.5% of Scope 2. The emissions target has been approved by the Science-Based Targets Initiative in which Origin Energy implements five pillars of decarbonization, such as exiting coal-fired generation by 2032, growing more renewables in the portfolio, utilizing a strong gas pipeline, empowering customers with cleaner and smarter energy solutions, and demonstrating leadership in climate change advocacy. From these pillars, there was an improvement in the Scope 1 & 2 emissions intensity of integrated gas, from 5.61 tonnes of CO <sub>2</sub> -e to 5.17 tonnes of CO <sub>2</sub> -e. The emissions reduction target will be achieved through energy efficiency, methane reduction, flaring management program, and green technology. Besides, PTT has expanded its investments in renewable energy. During 2017, PTT has reduced its Scope 1 + 2 by 10% compared to the 2013 baseline year. Exxon focused on energy efficiency as it is the best way to reduce emissions. During 2017, Exxon reached 87% of the emissions target. The company has committed to reducing 3 million tonnes of CO <sub>2</sub> by 2030, compared to the start of 2017. Low carbon R&D and renewable investments are the main priorities. Equinor has been embedding energy efficiency into its business processes. As a result, the 50% emissions reduction was achieved in 2017. Although its target has not yet been approved by the Science-Based Target Initiative, National Australia Bank considers a science-based target. Energy efficiency initiatives, such as improving HVAC lighting, and air power-down, solar PV installations, as well as carbon neutral purchases, are activities done by National Australia Bank to reduce its emissions. In 2018, the bank achieved a 12% emissions reduction of its target (21% by 2025), increased by 2% from the previous year. The energy usage reduced by 8%. AXA has set the targets covering energy consumption, business trip, office paper, as well as marketing and distribution paper. Concerning these targets, AXA's emissions fell by 11% between 2017 and 2016, and by 25% between 2017 and 2015. Also, AXA's target has been in line with a science-based target. The company has implemented low-carbon energy installation through Solar PV, low-carbon energy purchases (biomass and renewable electricity purchased with certificates), energy efficiency, and business travel improvement. Regarding the Scope 1 and 2 (location-based), the emissions decreased by 23% in 2017 compared to 2012. Meanwhile, the emissions from Scope 3 declined by 15%. Since the company operates in the property sector, the initiatives include energy efficiency (building services), low-carbon energy installations (solar PV), and low-carbon energy purchases (biogas, renewable electricity fuel mix). In 2017/18, Lansdec has reduced its carbon intensity by 28.0% compared to 2013/2014 baseline. Regarding Scope 1, 2, and 3, GHG emissions fell by 11%, 33%, and 36% respectively compared to the 2013/2014 baseline. The initiatives implemented by DSM include energy efficiency (improving HVAC and lighting) and renewable energy to supply electricity. As a result, DSM's GHG efficiency improved by 37% in 2018 (20% in 2017) compared to the 2009 baseline. Although the target has not been approved yet by the Science-Based Target Initiative, the Scope 1 + 2 market-based GHG emissions fell from 1.50 in 2017 to 1.23 million tons of CO <sub>2</sub> in 2018. The energy efficiency improved by 1.1% in 2018 compared to 2015 baseline. To reduce its carbon emissions, GSK has done some initiatives, such as solar installations, a combined heat and power plant, and more energy efficiency in lighting, heating, and manufacturing. GSK's target has not approved by the Science-Based Target Initiative, but in 2018, the company reduced its Scope 1 & 2 emissions by 4%. In 2017, the emissions decreased by 21% compared to the 2010 baseline, which means 84% of GSK reduction target. The target set by AstraZeneca has been approved as a science-based target. The initiatives implemented include energy efficiency (HVAC, lighting), investing in renewable energy (biogas, solar PV) and electric vehicles, and product and process improvements. As a result, during 2018 the Scope 1, 2, & 3 emissions had reduced by 6%, 54%, and 2% respectively since 2015. Besides, the reduction reached 0.4% of total operational GHG footprint since 2015. To achieve the target, Schneider Electric considers a science-based target. Three main actions to reduce the emissions include energy productivity, use of renewable electricity, and progressive phase-out of the use of SF <sub>6</sub> in the products. SE has achieved the target from 2014 to 2017 and made significant progress in tackling climate change. SE has been admitted as the company that has a strong commitment to a sustainable economy and awarded as the leading company in combating climate change by CDP. The target has been approved by the Science-Based Targets, and the initiatives implemented via Energy efficiency (lighting), low-carbon installations, low-carbon electricity purchases, and improving transportation fleet. In 2017, the company achieved 10.20% reduction of the 2009 baseline or 31.88% of the target for the Scope 1 + 2, while the Scope 3 emissions declined by 9.22% to 2012 baseline (66.6% of the target). Some initiatives have been done like energy efficiency (lighting, HVAC, process optimization) and joining RE100 (low-carbon energy purchase wind power). The target set by Philips has been approved by the Science-Based Targets initiative. In 2018, Philips's operational carbon intensity improved by 11%. For Scope 2 emissions, 36% was reduced compared to 2017, and the Scope 3 emissions fell by 7.3%. The target has been approved by the Science-Based Targets, and Autodesk has implemented several initiatives, i.e. energy efficiency (machine replacement) and powering the facility and data centre by using renewables. As a result, GHG emissions decreased by 38% of the 2009 baseline in 2018. HP has received approval from the Science-Based Targets. The initiatives implemented by the company, such as energy efficiency (building controls, lighting upgrade), and low-carbon energy purchase (wind power). HP has succeeded to reduce the Scope 1 & 2 emissions by 35% in 2017 from the 2015 baseline. Meanwhile, Scope 2 decreased by 33% compared to 2010. The company's target has not been approved as a science-based. To achieve the target, some initiatives, such as energy efficiency (HVAC), low-carbon energy purchase (wind power), and carbon offset, have been implemented. In 2018, the company achieved its target of net-zero Scope 1 & 2 (market-based) emissions. Wipro's target has been approved as a science-based target. Wipro has done some initiatives to achieve its target, i.e. energy efficiency (motors and drives, building controls), and low-carbon energy purchase (solar PV). Scope 1 & 2 emissions fell by 13.1% for 2017-2018 while energy efficiency and green procurement improved circa 5.7% and 20% respectively. Besides, Scope 3 emissions decreased by 13% in the same period. The target has uniformly not been approved as science-based. Some initiatives to achieve the target via energy efficiency (climate factor and TCR improvement, process optimization) and low-carbon energy investments and purchases. In 2018, the net CO <sub>2</sub> emissions fell by 1% from the previous year, meaning that it was equal with a 25% reduction compared to the 1990 baseline. This performance has exceeded the year-on-year reduction objective. Dalmis focuses on energy efficiency to achieve its target. In 2018, Dalmis moderated its carbon footprint by 26% compared to the 1990 baseline. The company was also reported as one of the lowest carbon footprints among global cement manufacturers in its Eastern India cement operations. Givaudan purchases low-carbon energy (hydro and wind power) to supply the electricity and improves its energy efficiency in achieving its target. The target itself has been approved as science-based by the Science-Based Targets initiative. In 2017, scope 1 and 2 emissions have reduced by 8.1% compared to 2015, meaning that the company has completed 27% of the target. Dawa has done some activities to reduce its emissions target. To supply electricity, Dawa uses renewable energy sources. Dawa has improved its energy efficiency through a green building approach and its supply chain. In 2018, Dawa reduced 60% CO <sub>2</sub> emissions per unit sales compared to the 2005 level, and 45% CO <sub>2</sub> emissions. The percentage of renewable energy achieved 65% in the same year.

Dato Trust Construction Co. Ltd.	Dato focuses on two main approaches to achieve its target. First is energy saving, includes improving thermal insulation performance and adopting high-efficiency electrical appliances. Second is energy creation by generating energy photovoltaics. The company had reduced 4.8% emissions from Scope 1, 2, & 3 in 2017. The target set by Digma has not been approved as a science-based target. As a pr company, Digma has implemented some initiatives to achieve its target, via energy efficiency (motor and drives, building controls, insulation, HVAC, lighting, a upgrade) and use low-carbon energy (on-site and off-site renewables). In 2018, succeeded to reduce 8.1% energy consumption and 9.5% the Scope 1 & 2 em compared to the 2013 baseline.	
	Digma	
Telecommunication services	BT Group	BT Group has received an approval regarding its target as science-based. 3 initiatives implemented include low-carbon purchase (mix of quality renewables) with its RE100 commitment, fugitive emissions reduction, energy efficient improving transportation fleets. In 2018, the progress made by BT Group include reductions in global operational emissions. BT cut its carbon intensity by 25.7% 2016/2017. Besides, BT used 2.24% less energy. The target is science-based and has been approved by the Science-Based 1 initiative. KPN has implemented some initiatives to achieve the target, such as efficiency (heat recovery), cooling technology, and network platforms rationalis low-carbon energy purchase (wind and biomass), and reduction on ca consumption. As a result, in 2018, KPN finally reduced 24% energy coa compared to the 2010 baseline. Telefonica's GHG emissions target has been certified through the Science Targets Initiative (SBTI), in which initiatives implemented include energy eff (lighting, process optimization, cooling technology, power unit upgrades, and u transformation), low-carbon energy installations (solar PV), and low-carbon purchase. In 2018, Telefonica reduced its total Scope 1 and 2 emissions by compared with the 2015 baseline. Scope 3 declined by 12% compared to 2015. B the percentage of renewable energy increased to 55% of total energy. The Science-Based Targets initiative has approved Acciona's GHG emissions. The company implemented several initiatives, such as low-carbon purchase to electricity and energy efficiency in ship, process optimization. In 2018, Acciona manage to reduce its emissions by 7.4% compared to the previous year. Also, A achieved carbon neutrality by offsetting 100% of emissions that could not be red. Naturgy Energy Group SA's target has been approved as science-based in which some int have been done to achieve the target. They are energy efficiency (combined he power, process optimization), improving transportation, and fugitive emi reductions. The progress made by the company in 2017 was to reduce 65.4% emi in 2018, the total Scope 1 + 2 GHG emissions decreased by 11.2% compared to and this reduction met 95.6% of the SBTi target set for 2025. Suez has set its target to reduce emissions by 45% by 2030 compared to the baseline. This target has been validated by the Science-Based Targets initiat achieve the target. Suez has implemented several actions, via clean vehicles, imp energy efficiency and renewable energy consumption. As a result, 10MCO <sub>2</sub> em were avoided in 2018. The target has not obtained approval as science-based. Some initiatives imple include process emissions reductions (new equipment), low-carbon energy insto (biomass, waste-to-energy facility), and energy efficiency (process optimi building control). In 2018, the company reduced 63 MCO <sub>2</sub> emissions since 2011.
	Koinklijke KPN NV	
Utilities	Acciona S.A. EDP	
	Naturgy Energy Group SA	
Suez	Suez	
	Veolia	

Source: CDP (Carbon Disclosure Project), 2019