

The Current Issue of Sustainable Development for Construction Contractors in Vietnam



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ABSTRACT: Sustainable development is a development that can meet current needs without affecting or harming the ability to meet the needs of future generations. In other words, sustainable development must ensure efficient economic development, social equity, and environmental preservation. Research on sustainable development and sustainable development in the construction industry is a valuable theoretical and practical topic. This article focuses on clarifying several issues related to sustainable development, the impacts of the construction industry on three aspects of sustainable development in Vietnam, and also highlights the current status of sustainable development practices among construction contractors in Vietnam, along with some solutions for sustainable development by construction contractors in Vietnam today.

KEYWORDS: Sustainable development, contractors, construction, Vietnam, current status

I. INTRODUCTION

Sustainable development is now an essential trend in the process of societal advancement. Sustainable development is the harmonization of three elements: economic development; social equity, and environmental protection. The construction industry is particularly concerned due to its negative impacts on the environment, such as carbon emissions, noise pollution, air pollution, water sources, and waste from construction sites. However, the industry's impact on Vietnam's economy and society should not be underestimated. In particular, the growth rate of the construction sector in 2022 is estimated to reach 8-8.5% (Hiếu, 2022), with over 7 million workers engaged in the industry. This number is predicted to potentially reach 12-13 million people by 2030 (Dich Phong, 2020). Sustainable development is researched in almost every field, and the construction industry is no exception. Sustainable development in construction is extensively studied in various aspects, including green construction projects, the use of sustainable building materials, efficient and reusable energy sources, minimizing the environmental impact of construction projects, and various management areas such as project management, risk management, knowledge management, supply chain management, and safety management.

However, in line with current development trends, to achieve holistic sustainable development, individual businesses, especially construction companies, need to consider integrating environmental performance, social equity, and economic efficiency into their organizational structure, management processes, policies, and business activities (Terouhid and Ries, 2016; Afzal, Lim, and Prasad, 2017).

II. RESULTS AND DISCUSSION

Sustainable development

Sustainable development, a concept that emerged in 1980, was first articulated in the "World Conservation Strategy." It emphasized that human development should not solely focus on economic growth but also respect the essential needs of society and the ecological environment. This concept was further clarified in 1987 by the United Nations World Commission on Environment and Development, which stated that development should be closely linked to the efficient use of natural resources, improving human living environments, and ensuring the needs of both the present and the future.

In principle, sustainable development is the harmonious development of three factors: economic, social, and environmental. Specifically, economic sustainable development involves stable economic growth achieved by improving the quality of science and technology in production without harming society and the environment. Social sustainable development aims to ensure social equity, eradicate poverty, and meet the basic rights and needs of workers without harming the economy and the

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environment. Environmental sustainable development focuses on the responsible use of natural resources, and energy, minimizing environmental pollution, maintaining biodiversity, and reducing the impacts of climate change, and natural disasters. United Nations member countries have adopted Sustainable Development Goals (SDGs), comprising 17 goals, 169 specific targets, and 232 indicators. Each country is encouraged to adapt these goals to its context and level of development.

In Vietnam, the concept of sustainable development has been continuously developed and refined in line with each Party Congress. While earlier congresses indirectly addressed sustainable development through phrases like "ensuring harmony between economic development and social development" and "balancing economic growth with social progress," it was the 8th Congress in 1996 that formally and explicitly mentioned sustainable development with specific and clear solutions. Over time, the perception of sustainable development in Vietnam has evolved and aligned with global trends, with adjustments made to suit the country's reality. In particular, rapid and sustainable development is seen as a top priority. The government approved the Sustainable Development Goals for 2030 in 2019, consisting of 17 general goals and 119 specific targets, which are applied flexibly to various sectors of activity.



Figure 1. 17 Sustainable Development Goals of the World and Vietnam for the period 2015 - 2030 (Source: Genesis School, 2021)

In the face of challenges and difficulties related to the economy, society, and the environment, with the aspiration for Vietnam to become a comprehensive sustainable development nation, construction enterprises, as integral components contributing to the country's economic development, must recognize that development must be sustainable (Nam, 2020).

To ensure this, businesses need to consider integrating environmental performance, social equity, and economic efficiency into their organizational structure, management processes, policies, and business activities (Terouhid and Ries, 2016; Afzal, Lim, and Prasad, 2017). Elkington (Elkington, 1994; Elkington and Rowlands, 1999) introduced the concept of the "Triple Bottom Line" (3BL): Economic, Social, and Environmental. In 1992, the International Institute for Sustainable Development (IISD) proposed the concept of a business's sustainability. According to this concept, businesses need to protect, maintain, and enhance the human resources and natural resources necessary for the future while meeting their own needs and those of stakeholders when implementing their strategies and business activities. Phan Van Dan (2012) developed a measurement scale for Business Sustainable Development. This research quantified 106 enterprises in Bac Lieu province and categorized them into three groups of measuring factors: Economic Sustainability, Environmental Sustainability, and Social Sustainability (Labor practices, Human Rights, Social Impacts, Product Responsibility, and Social Welfare). When implementing sustainable development, construction contractors will achieve numerous benefits. According to Tan and colleagues, a good sustainable construction strategy, such as effective corporate social and environmental management, will increase shareholder value and enhance the company's reputation. Additionally, from an economic perspective, sustainable development allows contractors to have a comprehensive view, formulate specific strategies for efficient procurement, reduce construction waste, ensure better worker safety and health through effective risk reduction plans, and increase revenue by improving sustainable performance in the market (Robinson et al., 2006).

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The impacts of the construction industry on three aspects of Sustainable Development in Vietnam

Currently, Vietnam and countries around the world are still trying to recover the economy after the COVID-19 pandemic with the hope that the situation will improve after 2 years of resistance. In the first 6 months of 2023, our country's economy and society have taken many reasonable steps to help stabilize the macro economy and control inflation appropriately. The country's GDP growth in the second quarter of 2023 is estimated to increase by 4.14% over the same period last year. However, according to delegate Tran Van Tien, "Although the economy has high GDP growth, it is not sustainable, the growth rate of social labor productivity is not commensurate with the economic growth rate". In addition, it can be said that 2022 and 2023 will be especially difficult years for the construction industry. The world context with escalating political conflicts shows no signs of stopping along with the embargo, which has hurt gasoline prices; Zero Covid policy in China has caused supply disruption; developed countries have had to tighten monetary policy and increase interest rates due to high inflation; ... These negative impacts contribute to the increase in raw material prices. Specifically, in the first 6 months of 2022, steel prices have increased 7 times, sometimes reaching about 19 million VND/ton, Meanwhile, the price of cement and asphalt materials increased by about 15% compared to the fourth quarter of 2021. Although the situation has changed from mid to late 2022, raw material prices have tended to decrease, but that is due to **cooling real estate market** oversupply high inventory, etc. These things make businesses in the construction industry, especially contractors, significantly affected. According to the 2022 annual report, Hoa Binh Construction Group Joint Stock Company for the first time had business results with negative profits, a figure of up to 2,572 billion VND. In addition, from 2017 up to now, the decrease in the number of urban housing projects licensed for construction has caused the number of jobs to decrease. **But** the labor force is always increasing every year, causing a situation of underemployment. Regarding the environmental aspect, from 2017 to the present, the Department of Construction Inspectorate has fined more than 53,000 projects causing environmental pollution with an amount of nearly 100 billion VND (Moc Mien, 2023). In addition, according to the President of the Vietnam Confederation of Commerce and Industry (VCCI), "Businesses operating based on sustainable management models are more resilient and **stronger** than other businesses in the context of sustainable management." The actual COVID-19 scene just happened" (Vi, 2020). With the challenges that construction contractors are facing, sustainable development is a necessary goal to increase the competitive advantage of businesses, while increasing efficiency in exploiting resources, improving productivity **and minimize** costs, attracting talented labor resources, contributing to society, and protecting the environment, contributing to the overall sustainable development of the Nation.

Current status of sustainable development implementation by contractors in Vietnam

Currently, in Vietnam, businesses are increasingly interested in sustainable development, this is clearly shown when the number of businesses participating in evaluating and publishing sustainable development reports is increasing. Defined by the World Business Council for Sustainable Development (WBCSD), Sustainability Reports "are declarations and responsibilities that businesses must bear to stakeholders for their actions." move towards its sustainable development in economic, environmental and social aspects" (WBCSD, 2003), also from here, businesses have an overview of the business, identifying **shortcomings need to be improved**. According to Circular No. 155/2015/TT-BTC on guidance on information disclosure on the stock market, information on the environment, society, and corporate governance has been integrated into the Annual Report. At this time, construction enterprises also began to implement Sustainable Development Reports to confirm that their activities are consistent with the country's sustainable development goals. However, when the Ho Chi Minh City Stock Exchange, Hanoi Stock Exchange, and Investment newspaper jointly organized the Listed Enterprise Voting in 2018, it showed that the majority of enterprises integrated evaluation of social and environmental impacts in the Annual Report. Currently, although there is growth in quantity, the numbers are not impressive, especially in the Construction industry. Specifically, in 2019, there were 600 businesses in the world from 65 countries implementing Sustainability Reports, of which Asia only accounted for 18% as shown in Figure 1.

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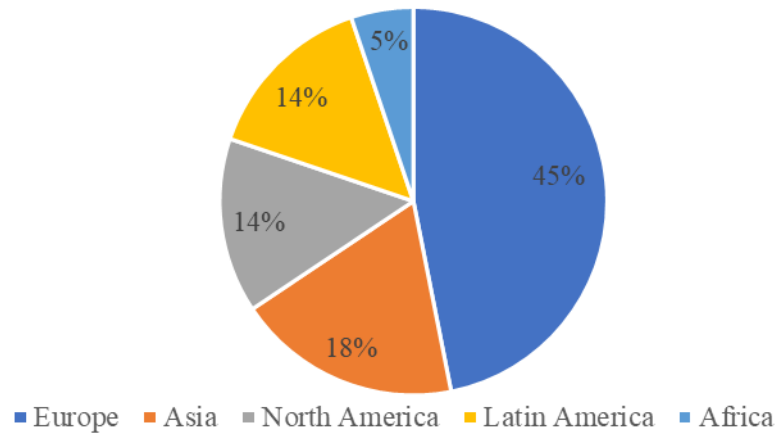


Figure 2. Percentage of businesses on continents participating in implementing the Sustainable Development Report

(Source: Business Council for Sustainable Development of Vietnam, 2019)

According to HAWEE Vice President Xuan Lien, sustainable development should be in the process of implementation, not still at the idea stage (Hien, 2023). For construction contractors, Chang and colleagues (2016) proposed shown in Table 1, including 29 important development criteria for sustainable development of contractors.

Table 1. Sustainable development criteria of construction contractors are shown in 3 aspects (Chang et al., 2016)

Sustainability aspect	Criteria
Economy	Business strategy
	Quality management
	Supply chain management
	Innovation and improvement
	Corporate governance
	Service and customer satisfaction
	Communication management
	Engage stakeholders
	Risk management
Society	Occupational health and safety
	Education and training
	Salary and benefits
	Anti-corruption and fair competition
	Human rights
	Support community development
	Comply with applicable laws and regulations
	Pay attention to all employees
	Industry development
Environment	Environmental Management
	Construction waste management
	Efficient land use
	Water use efficiency
	Save raw materials
	Energy saving
	Managing impacts on biodiversity
	Reduce emissions
	Innovation and green materials
	Light pollution
	Noise control

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Change efforts of construction contractors in sustainable development

Economic:

- Strategic orientation: Some construction contractors in Vietnam approach and apply ESG - Criteria for evaluating the sustainable development of businesses based on Environmental concepts (E-Environmental); Social (S-Social); and Corporate governance (G-Governance), this is also the basis to help investors choose and consider capital investment for businesses. The process from idea to implementation and action takes a long time, requiring contractors to have enough knowledge and financial and human resources to be able to position the business to propose an appropriate sustainable development strategy.

- Increase economic efficiency: Currently, with the difficult situation of the construction industry when it is affected by political conflicts, supply source disruptions, and the frozen real estate market, **lack of work**, material prices increased, etc.. To overcome the objective effects of the market, Hoa Binh proactively sought new customers and job sources, completed bidding documents, and optimized costs and solutions. Construction methods from the initial steps of project implementation to save costs. Tracodi strengthens financial management and risk management to minimize liquidity risks.

- Risk management: Implementing risk management helps contractors enhance decision-making capacity, have a framework for implementing plans, and arrange work in a strict and controllable manner. minimize errors, and at the same time have solutions to minimize the impacts caused by risks, protecting business image.

- Applying technology and innovation: achieving high efficiency and minimizing errors in business management as well as construction projects, many contractors have been applying tools and technology new.

According to Tan et al. (2011), applying technology and innovation in construction is one of the criteria for sustainable construction. Some tools used by contractors include:

Building Information Modeling (BIM): Used throughout the project life cycle and no longer unfamiliar to contractors, BIM helps contractors and stakeholders have an intuitive view **to minimize** errors in design, thereby reducing costs and time. In addition, this is also a tool to promote cooperation between contractors and stakeholders when the tool allows tracking when the project has changed and clear information. BIM also helps store repair and maintenance history when the project is put into operation.

Digital signature: According to Hoa Binh (2022), the use of digital signatures has helped reduce at least 50% of application review time, and 60% of paper printing and document distribution costs,...

E-learning: During the COVID-19 period, technology applications to serve learning and training developed strongly. Currently, applications are still used to reduce travel time, and money and help workers be flexible about their study location.

Digital transformation in business management: Hoa Binh (2022) has built for itself a project management system, whereby the contractor's project information and data are digitized to control strict schedules, and costs, have uniformity, avoid errors, easily find information, and reduce unnecessary paper documents.

Applying modern construction equipment and technology: According to Hung Think Incons (2023), contractors have been using machinery and equipment to meet higher labor productivity, and have plans for Effective implementation, reducing waste during use.

In the social aspect:

Community Investment and Development: Many businesses engage in meaningful community activities. For example, in Hoa Binh, one company organizes annual blood donation drives, and others like Hung Think Incons (2023) support charitable foundations. Ricons (2023) sponsors programs at universities and provides essential supplies to disadvantaged families.

Workforce Capability Enhancement: Various skill training programs and skill development initiatives are undertaken by companies to enhance the skills of their workforce. According to reports from construction contractors in Vietnam, training hours are on the rise, and companies are increasingly turning to online learning to empower their employees, allowing for greater autonomy and cost savings related to commuting and facility expenses (Hoa Binh, 2023; Hung Think Incons, 2023; Ricons, 2023).

Ensuring Fair Wages, Bonuses, Welfare, and Equity: A fundamental goal of sustainable development in the social aspect is ensuring fairness. Construction companies have clear and transparent wage, bonus, and welfare policies. Ethical terms and conditions are publicly enforced. Additionally, there is monitoring, supervision, and measures to address misconduct within the companies to ensure fairness and eliminate discrimination and conflicts.

In the environmental aspect:

Green Buildings: The trend among consumers is increasingly toward sustainable development and environmental protection, making green buildings more relevant. Furthermore, achieving sustainability is now a competitive criterion in construction projects.

Efficient Resource Management and Water and Energy Conservation: For instance, Hung Think Incons (2023) invests in modern, high-efficiency machinery and equipment to save fuel. They also plan, monitor, and control equipment to avoid damage that

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could lead to significant cost losses. Similarly, Vinaconex (2023) applies smart building control systems in their factories, buildings, and projects to reduce costs and save energy directly and indirectly. Many construction companies use inverter air conditioners and LED lights in their offices to save electricity.

Effective Waste and Wastewater Management: Contractors strictly adhere to legal regulations on wastewater treatment, waste sorting, and disposal to protect the environment.

Recycling and Sustainable Materials: To minimize environmental damage and energy loss during material production, construction companies are increasingly using sustainable materials in their projects. For example, Coteccons (2023) has increased the use of non-fired materials like cement bricks and AAC bricks. They also collaborate with distributors to use fly ash, a recycled material, in most of their concrete construction projects. Additionally, Coteccons employs recycled materials and partners with organizations like Plastic People to create medals for the Coteccons Quang Binh Marathon 2022 event.

Benefits that contractors achieve through sustainable development

Enhancing the Company's Image: Changing consumer attitudes are shifting towards environmentally friendly products that still meet their needs and demands.

Increasing Market Competitiveness: The construction industry is no exception when it comes to sustainable development criteria. These criteria contribute to giving companies an edge over their competitors in the market.

Meeting Investor and Stakeholder Needs: Investors and stakeholders have their requirements in terms of economic, environmental, and social aspects for construction contractors. Implementing sustainable development is both a pressure and a necessity for contractors to maintain long-term relationships with their partners.

Attracting Investment Opportunities: Sustainable development initiatives can attract investment opportunities from environmentally conscious investors who prioritize responsible business practices.

Enhancing Resource Utilization Efficiency: To adapt to changes and innovations in the construction industry, training programs are essential.

Improving Economic Efficiency: Reducing operating costs is crucial for economic efficiency. Through risk management plans, companies can identify potential risks and minimize losses. Construction contractors also see profit potential in minimizing environmental risks through proactive energy management and energy conservation measures.

Reducing Operational Costs: By actively improving energy efficiency and reducing energy consumption, construction companies can cut down on operational costs and enhance economic efficiency.

Challenges and limitations

Increasing Investment Costs: Green projects often come with increased costs of 20-30% or even higher, making it challenging to convince investors. Additionally, there are costs associated with changing processes and providing training to meet the requirements for green construction.

Dependency on the Real Estate Market: Economic downturns have led to a decrease in investment and home purchases, affecting the construction industry and leading to job shortages, reduced revenue, and unemployment among construction workers.

Transparency Issues: While sustainable development is a necessary goal, some companies may not fully implement it. Some companies may use sustainable development as a marketing tool without adhering to environmental laws.

Financial Challenges: Many construction companies face financial difficulties due to delayed payments from investors, resulting in financial pressure, debts to subcontractors and suppliers, and financial constraints. Financial stability is a priority for companies, and it is also a necessary condition for sustainable development.

Proposed Solutions

Enhancing Understanding of Sustainable Development among Construction Companies: Increasing the knowledge of sustainable development is crucial, as 60% of companies currently lack knowledge in this area. Various seminars and workshops on sustainable development in the construction industry can help raise awareness. Additionally, organizations like VCCI provide criteria to help companies have a broader view of sustainable development through the SCI 2023 criteria. VCCI also updates and adjusts the criteria to ensure that companies comply with the law (accounting for 63% of the criteria) and meet the foundation of sustainable development.

"Green Business" Support Program: The government has been providing capital support to private enterprises aiming for sustainable development. Besides, ensuring the rights of contractors in situations of outstanding debts in the current construction sector is necessary.

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Mature Assessment Model for Sustainable Development of Construction Contractors: This model takes into account criteria that influence sustainable development and provides descriptions of maturity levels in different stages of sustainable development. The model helps contractors assess their current status, propose basic criteria for achieving low to high levels, and offer future directions in their strategies. It guides actions to achieve higher levels of sustainable development.

III. CONCLUSION

Vietnam has strongly committed to implementing sustainable development goals, and individuals, and businesses, especially construction contractors, play an important role in achieving the goals. that overall. The construction industry has impacts on the economy, society, and the environment, and construction contractors face risks and challenges in the context of complicated developments at home and abroad regarding war, frozen markets, supply disruption, rising inflation, etc. Sustainable development should be one of the goals in the development strategy of businesses to survive and achieve success in Vietnam. However, it is not easy to achieve sustainable development if businesses do not change their traditional business thinking, which is to put profit interests above social and environmental issues. In Vietnam, a small number of contractors carry out sustainable development, mostly at large-scale enterprises. Financial challenges in converting processes, and improving and applying techniques to achieve compliance not only on reporting, make it difficult for contractors. However, according to VCCI's proposed set of criteria for evaluating the sustainable development of businesses, 63% of the criteria belong to legal compliance. Therefore, implementing sustainable development of businesses will be easier. The Party and state also have supportive policies while removing difficulties in the current market to help contractors financially during the implementation phase of sustainable development.

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