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Environmental Pollution and the Importance of Green Accounting in Enterprises in Vietnam

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Abstract

Environmental pollution is currently a prominent problem. However, this pollution phenomenon has not received adequate attention from businesses in Vietnam. Along with the development of production, Vietnamese businesses are emitting emissions into the environment that are toxic to humans. In determining the financial results of production and business activities, businesses have not yet determined the cost of environmental pollution after the production

process. Green accounting can be understood as a modern and comprehensive accounting system to record, synthesize and prepare reports for an organization, to fully reflect the contents of assets, liabilities, and investment capital. Investment, revenue and expenditures for the nation's green environment. Calculating environmental costs in business performance will help Vietnam develop production and business activities towards sustainable development.

Keywords: Green Accounting, Manufacturing Enterprises, the Importance of Green Accounting

1. Current status of environmental pollution in Vietnam

Natural conditions, climate and weather factors such as radiation regime, monsoon circulation regime, temperature, rainfall and humidity... play an important role, influencing the diffusion of substances in the body. Air environment. The rate of forest cover in regions throughout the country, the area and standards of urban trees are also some of the factors affecting outdoor air quality. Socio-economic development activities, including the urbanization process, industrial production activities, transportation activities, construction and civil activities, agricultural production activities and craft villages... have and is creating great pressure on the air environment. From 2020 to 2021, the global economy, including Vietnam's, was disrupted by the COVID-19 pandemic. Although the economic growth rate in Vietnam is low, the pressure on the environment from economic development activities is not small. The reason is that our country's production technology is not yet modern, the efficiency of energy and resource use is not high, urban infrastructure is not synchronized with the pace of urban development, increase in means of transport, many road transport means are out of date, do not meet emission control regulations, investment in environmental protection of businesses has not been paid attention important. In addition to environmental pressures from the manufacturing sectors, open burning, including post-harvest straw and waste, is not illegal in some localities; the use of charcoal and firewood for cooking and daily activities is also a source of air pollution.

The current status of air environment quality in Vietnam is reviewed and evaluated in three main areas (1) urban areas, (2) industrial production areas, (3) craft villages and rural areas. The evolution of air environment quality is assessed based on the synthesis of a series of monitoring data from 2016 to 2021 from automatic, continuous air monitoring stations of the Central and local levels, and monitoring results. Periodically from the National Environmental Monitoring Program and local monitoring programs, compared with the monitoring results of the previous period, the values of parameters are compared and compared with technical regulations. Current national environmental standards for ambient air quality. Air quality in large cities and some industrially developed urban areas continues to be polluted at some times of the year, in which dust pollution is still a concern. Concentrations of dust parameters (PM_{2.5}, PM₁₀ and TSP) in some areas are high, especially at traffic axes, main roads or areas around industrial parks in urban areas. Big. The impacts of climate factors create the law of air quality evolution according to the seasons of the year, clearly shown in the Northern region, dust pollution is concentrated in the winter months, with little rain; Dust pollution levels in the southern region also decrease significantly in the rainy season months and are higher in the dry season. In industrial production areas, the current prominent problem is also dust pollution. TSP concentrations at many monitoring points around industrial parks exceed the prescribed threshold, even many times

exceeding the 24-hour average and annual average limits of QCVN 05:2013/BTNMT. The concentration value of TSP, PM10 dust, PM2.5 dust around industrial parks in the Northern key economic region is higher than in the Central and Southern regions, due to the structural characteristics of production type and technology... fuel, location of different areas. Pollutants in the air around industrial production areas vary between regions, due to the distribution of types of production, SO2 and NO2 concentration values around industrial parks and zones. The industrial production sector is quite low, basically not exceeding the threshold of QCVN 05-MT:2013/BTNMT; the picture of the air environment around industrial parks will also improve significantly in 2020 and 2021. However, some operating industries continue to emit large amounts of dust into the air environment. These are mining, thermal power, and cement industries. In craft village areas, air pollution is still high, especially in craft villages that recycle metals, plastics, construction materials... In many rural areas, the quality of

the surrounding air environment is poor. Maintaining good levels, many areas have no signs of pollution (the content of most pollution parameters reaches QCVN 05:2013/BTNMT). Other problems such as photochemical smog, cross-border air pollution or acid deposition, odor pollution have had certain manifestations and affected the quality of the air environment in Vietnam. Similar to countries in Southeast Asia, the problem of photochemical smog is increasingly evident in large cities in Vietnam such as Hanoi and Ho Chi Minh City. Thus, air pollutants from industrial production activities include emissions arising from the process of exploiting and supplying input materials, from production stages such as burning fossil fuels, boiler emissions, volatile chemicals or noise generated from machinery and equipment... The amount of industrial emissions generated varies depending on the type of production. The amount of emissions generated from some industries is according to the table as follows:

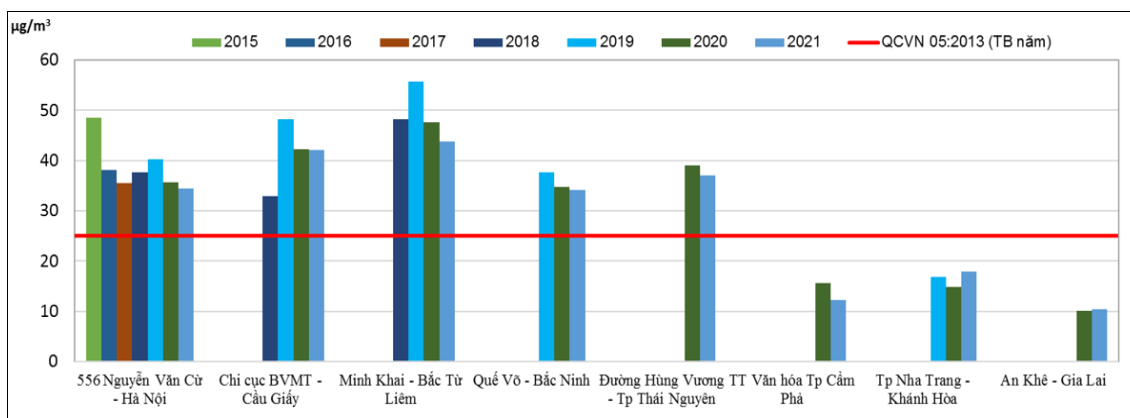
Table 1: Generating emissions from some industries

S. No	Type of production	Khí thải công nghiệp phát sinh
1	Coal thermal power industry	32.84 - 36.26 billion m3/year
2	Chemistry	25,2 billion m3/year
3	Paper industry	1,14 - 1,30 billion m3/year
4	Steel industry	
	- Iron	12 - 20 billion m3/year
	- BOF steel making	12,1 - 44,7 billion m3/year
	- EAF steelmaking	63,8 - 79,702 billion m3/year
	- Steel handle	21,718 million m3/year

Source: Compiled from data of the Department of Industrial Safety and Environment, Ministry of Industry and Trade (Official Dispatch No. 300/ATMT-BVMT dated February 28, 2022).

Air pollution due to dust, parameters CO, SO2, NO2... is an issue that has received a lot of attention due to its adverse impacts on human health and socio-economic development. For human health, air pollution, especially PM2.5 dust pollution, is becoming one of the problems with negative impacts on global health, including Vietnam. And is considered a leading risk factor for death and disability. Air pollution increases the risk of diseases acute lower respiratory tract infection, causing diseases such as asthma, cough, rhinitis, pharyngitis, bronchitis, pneumonia, even lung cancer; nervous breakdown, cardiovascular disease, stroke and shortening of human life expectancy. In addition, workers and communities surrounding industrial facilities

such as mining, construction, and construction material production are often at risk of diseases such as pneumoconiosis, bronchitis, and noise-induced deafness. Dust pollution continues to be a prominent air environment problem in urban areas. In Hanoi, Ho Chi Minh City and some industrially developed urban areas, the annual average value of PM2.5 dust parameters at automatic monitoring stations is continuously recorded exceeding the threshold of QCVN 05:2013. /BTNMT 2 to 3 times. Pollution is concentrated in traffic axes or areas surrounding industrial parks. For small and medium-sized urban areas or coastal cities, the annual average PM2.5 dust concentration value has not exceeded the threshold of QCVN 05:2013/BTNMT.



Source: The General Department of Environment compiles data from automatic monitoring stations and continuously transmits it to the Ministry of Natural Resources and Environment

Chart 1.1: Evolution of the annual average concentration value of PM2.5 at some automatic and continuous monitoring stations

Economic losses due to air pollution affecting human health include increased medical examination and treatment costs, lost workdays due to sick leave, loss of time for family members to care for the sick, increased insurance costs. Construction maintenance as well as ecosystem restoration.

2. The importance of green accounting in businesses in Vietnam

Green accounting is a type of accounting that tries to factor environmental costs into the financial results of business operations. The main purpose of green accounting is to help businesses understand and manage the interrelationship between traditional economic goals and environmental goals, towards sustainable development. (According to Wikipedia). The term green accounting was first commonly used by economist Peter Wood in the 1980s. To make it easier to grasp the concept, green accounting can be defined as follows:

Green accounting can be understood as a modern and comprehensive accounting system to record, synthesize and prepare reports for an organization, to fully reflect the contents of assets, liabilities, and investment capital. Investment, revenue and expenditures for the nation's green environment.

According to S. Sudhamathi, S. Kaliyamoorthy (2014), green accounting includes 3 main goals:

- Identify, collect, calculate and analyze materials and energy-related materials;
- Internal reporting and use of information on environmental costs;
- Provide other cost-related information in the decision-making process, with the aim of making effective decisions and contributing to environmental protection.

Some studies suggest that green accounting is divided into many different perspectives, including 5 main contents: Environmental financial accounting; environmental management accounting; environmental finance; environmental law; ethics and relations with the social community.

During business operations, many businesses create waste that is harmful to the environment. Along with Vietnam's development strategy is rapid, sustainable economic development, good environmental protection and harmonious solution of economic, environmental and social issues. The State has paid attention and issued more and more legal regulations to limit the over-exploitation of natural resources to serve economic and social development, and at the same time, also to limit to the maximum extent of violations, environmental destruction, and environmental pollution. Research and practical operations of businesses around the world show some benefits of green accounting for businesses' production and business activities, specifically:

- Green accounting helps provide information, check profits, revenues and environmental costs of businesses so that administrators can make production and business decisions.
- Applying green accounting will help enhance reputation and enhance the competitiveness of businesses. Green accounting helps provide more accurate, complete and comprehensive information to measure the implementation process, thereby improving the image of the business with stakeholders, helping businesses improve relationships with creditors, banks,

shareholders, customers... Meeting international environmental standards helps businesses create commercial advantages and enhance reputation in the community by developing a "green" image.

- Applying green accounting helps reduce production costs. If done well, businesses will limit input factors such as raw materials, energy, and labor that are consumed in the process of creating pollution, increase resource use efficiency, and increase competitive advantage. Due to reduced production costs.
- Good implementation of green accounting helps managers make important decisions such as reducing production costs, increasing productivity, investing in machinery and equipment for better, cleaner production, bringing benefits to customers. Quality products, leading to reduced costs. This helps businesses have a competitive advantage in terms of selling prices and higher profits, and reduces legal problems.
- Green accounting also helps improve the existing accounting system by organizing the accounting information system more scientifically and connecting the information flow of activities from different parts of the business.
- Green accounting helps accountants anticipate the environmental impacts some factors can cause to a business or organization, thereby helping business administrators and policy makers. Have reasonable ways to deal with and solve problems. From there, it helps reduce environmental risks as well as public health risks, while improving management accounting and environmental finance at the enterprise level.
- Green accounting contributes to finding and providing important and necessary information about costs and revenues related to the environment; Guide businesses and project owners in economic decisions, encourage them to make efforts in using resources, including natural resources created by humans effectively and minimizing environmental damage, limiting waste and pollution, and changing behavior towards the living environment.

3. Some difficulties when implementing green accounting in production and exploitation activities in Viet Nam.

In today's manufacturing enterprises, the release of waste and dirty gases into the environment is unavoidable. However, due to competitive pressure for profit, price or perhaps due to a low level of knowledge about environmental protection... many manufacturing businesses, especially those that produce products, dirty gas emissions such as the plastic industry, brick industry, mineral exploitation industry... have not mentioned much green accounting in recording environmental costs incurred during the production or mining process. Failure to record environmental costs in production and exploitation costs is often due to the following difficulties:

- Many businesses tend to avoid applying green accounting. Maybe it's because few businesses pay attention to overcoming environmental consequences after production and exploitation activities. Awareness about environmental protection is poor. They believe that it is difficult to measure the level of environmental harm of a business, so they often avoid this cost in determining business results.

- Currently, significant costs related to the environment have not been recorded in accounting accounts such as repair costs, compensation costs, troubleshooting costs, and cleaning and handling costs in accidents. Accidents, destruction of the ecological environment and living environment.
- Financial regulations, standards, accounting regimes and contract practices do not provide and meet the necessary information on environmental costs according to the requirements for Make decisions on contracts and prepare financial reports.
- Shortage of qualified human resources: Applying green accounting requires staff with high expertise in accounting and environment. However, currently this human resource is still in short supply.

4. Improve the effectiveness of green accounting for sustainable development

In the coming time, to promote the application of green accounting, Vietnam needs to focus on implementing the following solutions:

On the management side, it is necessary to realize that, for countries, where the input factors of the economy still rely heavily on natural resources, the application of accounting is mandatory, but need a reasonable long-term roadmap.

Business side:

- Need to change perception in applying green accounting in production and business activities.
- Business administrators need to have more information about environmental costs arising in business contracts to make appropriate business investment decisions, thereby, can both seek profits from projects and avoid environmental sanctions.
- Continue to enhance and improve the quality of accounting human resources to meet work requirements in the new context. Because green accounting is not yet popular in Vietnamese businesses, it is necessary to focus on training to improve the quality of accountants, and at the same time building an accounting department with capacity and experience in green accounting.

5. Conclude

In the process of socio-economic development, production, business and mineral exploitation are inevitable. Currently, the state is creating conditions for these businesses to develop. However, environmental pollution is becoming more and more serious, leading to pollution and changes in the climate in Vietnam in particular and the world in general. To overcome this situation, manufacturing and mining enterprises need to have a long-term strategy to incorporate green accounting into the costs of production and business activities. From there, these businesses have a cost to help the state improve the atmosphere after the production and exploitation process. Or businesses have measures to immediately treat gas waste that pollutes the environment to keep production and business activities developing in a sustainable direction.

6. References

1. Ministry of Natural Resources and Environment, Report on the current state of the national environment 2021, air environment, current situation and solutions, Hanoi in 2022.
2. Law on environmental protection.

3. P, Seifert EK. Green Accounting. London: Routledge. Hien, D.T.T. (2016), "Green accounting and Environmental accounting - Some modern perspectives", Journal of Accounting and Auditing. 2003; 4.
4. Farouk S, Cherian J, Jacob J. Green Accounting and Management for Sustainable Manufacturing in Developing countries. International Journal of Business and Management. 2012; 7(20):36-43.