IMPLICATIONS FOR IMPROVING THE APPLICATION OF ENVIRONMENTAL ACCOUNTING AT SUBSIDIARIES OF VIETNAM TOBACCO CORPORATION

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Abstract: For the companies under Vietnam Tobacco Corporation, the specific characteristics of the manufacturing industry are associated with activities that have the potential to negatively impact the environment. Therefore, completing the environmental management system is not only a mandatory requirement to meet legal regulations but also an effective tool to help enterprises effectively manage resources, minimize environmental impacts and affirm their commitment to social responsibility. The environmental Accounting system plays an important role in recording, measuring, classifying and reporting environmental information. However, in reality, the application of environmental Accounting at the subsidiaries under Vietnam Tobacco Corporation still has many limitations. Therefore, studying the implications and proposing solutions to improve environmental management will help enterprises not only improve management efficiency but also meet the expectations of stakeholders, including the state, investors and the community. This is an important premise to improve competitiveness and aim for sustainable development.

• Keywords: environmental accounting, application of environmental accounting, subsidiary.

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1. Improving the legal framework on environment and environmental accounting

Developing a legal framework on environment and environmental accounting based on sustainable development goals: Environmental Accounting (EA) is not only an accounting tool but also an important part of a business's sustainable development strategy. In the context of increasingly extensive international economic integration, the effective application of EA helps businesses improve their reputation and position in the market, building trust with stakeholders. The improvement of EA must be directed towards providing accurate and reliable information on the environmental impacts of businesses, thereby supporting economic and social decisions associated with environmental protection. This goal not only contributes to strengthening competitiveness but also helps businesses comply with international standards on social responsibility and the environment. To develop a legal framework on environment and EA linked to the Sustainable Development Goals (SDGs), it is necessary to implement many solutions synchronously. First, it is necessary to build and improve the legal system, including the promulgation of specific regulations on environmental measurement, reporting, and auditing, in order to ensure that businesses and organizations comply with environmental protection commitments. It is important to promote international cooperation to access and apply global EA standards, such as GRI (Global Reporting Initiative) or SASB (Sustainability Accounting Standards

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Board). Referencing the experience of applying EA from other countries, combined with the actual conditions of Vietnam, will help make solutions highly practical and effective during implementation.

Regarding the pressure from government agencies, *investors, financial institutions, and the community for environmental information:* Improving the application of EA at member companies of Vietnam National Tobacco Corporation (Vinataba) requires maximizing the positive pressure from stakeholders, including government agencies, customers, investors, and the community. These pressures are the driving force that compels companies to integrate EA into their business operations, not only to comply with the law but also to meet the increasing expectations of environmental responsibility. The proposed solutions are all focused on turning this pressure into a competitive advantage, helping businesses improve management efficiency and create sustainable value.

(i) Pressure from government agencies to comply with environmental regulations is a strong driving force. Member companies of Vinataba need to utilize this to develop clear and transparent EA processes, ensuring the collection and reporting of data related to greenhouse gas emissions, waste treatment costs, and recycling efficiency. Implementing regulations well not only helps businesses avoid legal penalties but also builds a positive image in the eyes of management. By strictly complying with standards, businesses can use EA reports as a tool to negotiate for preferential policies from the government, such as tax reductions or



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financial support for environmentally friendly projects.

(ii) Pressure from customers and the community is also an important driving force for subsidiaries to effectively apply EA. Customers today are not only concerned about product quality but also pay attention to the environmental responsibility of businesses. Subsidiaries can meet these expectations by making environmental protection costs transparent in product pricing and announcing initiatives to minimize environmental impacts. For example, they can use data from the EA system to launch marketing campaigns for "green" products, helping to improve trust and strengthen relationships with customers. At the same time, cooperating with the community in environmental protection projects, such as recycling packaging or reducing plastic waste, also helps businesses build a positive image, thereby reducing pressure from social advocacy groups. Investors, especially investment funds with ESG (Environmental, Social, Governance) criteria, are also a source of pressure to promote businesses to apply EA. To meet investor requirements, subsidiaries need to integrate information on environmental costs and efficiency into financial reports, helping investors clearly see the commitment to sustainable development of the business. Transparency in these reports not only attracts more capital but also enhances brand value. Member companies of Vinataba can take advantage of this to build strong relationships with investors, while also enhancing competitiveness in the market.

In addition, pressure from non-governmental organizations (NGOs) and environmental advocacy groups also plays a significant role. Subsidiaries need to proactively work with these organizations to ensure that EA processes are designed in accordance with international standards. Participating in NGO-led initiatives, such as programs to reduce greenhouse gas emissions or use renewable energy, not only helps businesses meet external requirements but also enhances their ability to learn and innovate.

At the same time, businesses can establish specialized departments for EA to ensure professionalism in handling external pressures. This department will be responsible for collecting, analyzing, and reporting environmental data, while also working directly with stakeholders to ensure that all requirements are met quickly and efficiently. This is how businesses maintain consistency in implementing environmental policies, while also minimizing risks arising from not meeting external expectations. In addition, member companies of Vinataba can enhance the application of technology to improve the effectiveness of EA. The implementation of EA software not only helps automate processes but also ensures transparency and accuracy in reporting. Pressure from management agencies to provide detailed and timely data can be met through modern technology systems, while also helping businesses save resources and improve work efficiency.

Finally, building an internal incentive mechanism to promote initiatives on EA is an essential solution. Member companies of Vinataba should establish reward programs for employees or departments that make outstanding contributions to improving the EA system or reducing waste treatment costs. This not only creates motivation to work but also helps spread environmental responsibility throughout the organization.

2. Building an environmental management accounting system

Building independent and complete an environmental management accounting system: To solve the problem of a lack of a complete Environmental Management Accounting (EMA) system, member companies of Vinataba need to focus on building an independent, complete, and professional EMA system. This system must be designed to collect, analyze, and report environmental information separately, without being dependent on or integrated into the current financial accounting system. This is a strategic step to meet the increasing demands for environmental management in the context of increasingly strict legal regulations and growing pressure from the community. This EMA system needs to be built on the principles of transparency, traceability, and completeness. Specifically, a separate set of accounts dedicated to environmental activities is a core element to ensure the system operates effectively. These accounts may include costs such as wastewater treatment, air emissions treatment, recycling costs, investments in green technology, and costs related to renewable energy. The development of specialized accounts not only helps the organization store EMA information systematically but also facilitates data retrieval when needed.

To optimize data collection and processing, the EMA system needs to integrate advanced environmental data management software. This software will help automate data entry processes, minimize errors, and save time. In addition, the software also provides powerful data analysis tools, supporting managers in making decisions based on accurate and timely information. For example, the software can provide environmental protection cost analysis reports by project, by production department, or in real-time, thereby helping the organization identify areas that need improvement.

Furthermore, cooperation with environmental experts is an important factor to ensure that the EMA system meets legal requirements and international standards. These experts will assist in identifying environmental protection cost items to be recorded, developing analytical models, and proposing solutions to optimize EMA activities. Thanks to their participation, Vinataba can enhance the reliability of environmental information, thereby effectively supporting the strategic decision-making process.

The EMA system is not only a management tool but also an important factor for member companies of



Vinataba to enhance social responsibility and improve brand image. With this system, businesses can easily demonstrate their commitment to environmental protection through transparent and complete reports. This will help the company build trust with stakeholders, from the government and the community to partners and customers. In addition, building this independent system also creates opportunities for businesses to apply modern management practices, especially sustainable management. By recording detailed costs and activities related to the environment, the company can plan long-term for green initiatives, measure effectiveness, and adjust in a timely manner to achieve sustainable development goals.

Generally, building an independent and complete EMA system is an essential step for businesses to enhance their environmental management capabilities. This is not only a measure to meet legal requirements but also an important tool for the company to create long-term value in its journey towards sustainable development.

Applying modern environmental management accounting analysis tools: To effectively manage costs and benefits related to the environment, the application of modern management accounting analysis tools such as Life-Cycle Costing (LCC), Cost-Benefit Analysis (CBA), and Activity-Based Costing (ABC) is essential. These tools not only help businesses optimize costs but also provide a scientific basis for strategic decisionmaking. The life-cycle costing (LCC) method is one of the important tools for assessing the total environmental protection costs associated with a product from the production, operation, and disposal or recycling stages. In the tobacco industry, member companies of Vinataba can use LCC to compare the costs of investing in energysaving production machinery and traditional equipment.

In addition, activity-based costing (ABC) is a tool that helps businesses accurately determine the costs associated with each specific activity in the value chain. This method is particularly useful in complex industries such as tobacco manufacturing, where each production stage can generate different amounts of emissions. For example, if a production line generates 70% of emissions, ABC will allocate environmental protection costs based on this rate, thereby helping businesses identify areas that need improvement to reduce costs and optimize efficiency. Using modern analytical tools not only helps businesses enhance competitiveness but also ensures compliance with increasingly stringent requirements from the market and international organizations. At the same time, the application of these methods is also an important step for member companies of Vinataba to move towards sustainable development goals.

Developing detailed environmental management accounting reports: Detailed EMA reports are an important tool to help member companies of Vinataba

provide comprehensive information on the effectiveness of environmental management measures. Building a detailed report not only helps to make information transparent to stakeholders but also supports the longterm strategic decision-making process. A detailed report should cover many aspects such as information on environmental protection costs, the effectiveness of environmental protection measures, and the economic impact of these measures. To achieve this, businesses need to invest in supporting tools such as data management software, integrated calculation systems, and automated reporting interfaces.

The content of the report should be designed to suit the information needs of each audience, from the leadership to investors, customers, and government agencies. For the leadership, the report should provide information to assess financial and non-financial aspects related to the environment. For investors, the report may emphasize the environmental protection efforts that have been implemented and the long-term benefits that these efforts bring.

In addition to providing detailed information, the report should also emphasize transparency. To achieve this, businesses need to establish internal audit and evaluation processes before publishing the report. At the same time, international standards such as GRI (Global Reporting Initiative) or CDP (Carbon Disclosure Project) should be applied to enhance the consistency and credibility of the report. Building detailed EMA reports not only brings short-term benefits but also supports businesses in meeting the increasing demands of the market and society. A detailed and high-quality report will help businesses improve environmental management efficiency, minimize legal risks, and build trust from the community.

3. Building an environmental financial accounting system

Regarding environmental assets: To serve the goal of environmental protection, tangible fixed assets related to the environment in a business should be identified and managed independently. Specifically, these assets should be recognized and presented separately in the list of fixed assets, and classified according to specific environmental activities such as waste treatment, emission control, or resource recycling.

Separately managing environmental fixed assets will bring many benefits. First, it helps businesses improve their ability to monitor and control investments related to waste treatment facilities or end-of-pipe technologies. Through this, financial reports will provide more accurate and transparent information to stakeholders. At the same time, the independent identification of environmental fixed assets also helps external parties, such as government agencies or investors, have a comprehensive and thorough view of the business's



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efforts to minimize environmental impacts. This not only affirms the business's commitment to sustainable development goals but also enhances its reputation and brand value in the eyes of the community.

Regarding environmental costs: Environmental costs are important information for both internal and external stakeholders. For managers, environmental costs help accurately determine the cost and selling price of products, thereby promoting environmental protection initiatives and optimizing economic and environmental efficiency. For external parties such as investors, management agencies, or financial institutions, environmental costs provide useful data to assess the environmental responsibility of the business as well as identify potential environmental risks. To manage effectively, environmental costs should be identified separately from normal costs. Businesses should classify environmental costs according to the following aspects:

- By specific environmental activities, such as waste treatment, greenhouse gas emission reduction, or resource recycling.

- By cost center... the departments or projects directly responsible for the environmental costs.

- By the component elements of environmental costs, such as labor costs, raw materials, or outsourced services related to environmental activities.

At the same time, it is necessary to establish detailed accounts in the accounting system to record each type of environmental cost separately. This not only ensures transparency but also helps managers easily monitor and control these costs. In terms of financial reporting, environmental costs should be recognized appropriately based on their ability to generate future benefits. Specifically:

- If environmental costs bring long-term economic value, they will be recognized in the financial statements as assets.

- If environmental costs affect the operating efficiency during the period, they will be recognized in the income statement.

Effective management and recognition of environmental costs not only help businesses be transparent in their financial activities but also contribute to affirming their commitment to sustainable development goals and responsibility to the community.

Regarding environmental liabilities: Environmental liabilities are obligations that a business must fulfill to comply with legal regulations and meet the concerns of stakeholders regarding environmental protection. At the same time, environmental liabilities are also an important basis for assessing environmental risks, legal risks, and financial risks, especially in the context of increasingly strict environmental regulations or when environmental incidents occur in the future. For effective management, businesses need to separate environmental liabilities from

normal liabilities in the accounting system and classify them into three main groups: payables, provisions, and contingent liabilities.

- Payables are obligations with clearly defined value and payment time, such as waste treatment fees or contributions to environmental protection funds.

- Provisions are estimated expenses for environmental obligations arising in the future but whose value has not been precisely determined.

- Contingent liabilities are liabilities related to events that may occur, such as remediation of environmental incidents.

Clear and independent classification of environmental liabilities will help users of financial information, such as investors, management agencies, and credit institutions, accurately assess the current and potential environmental obligations of the business. This not only ensures transparency in financial reporting but also helps businesses develop effective risk management strategies, towards sustainable development goals.

Regarding environmental income: Environmental income is the income arising from the sale of scrap or waste from production and business activities that are reused at other units, contributing to increasing equity and reflecting the effectiveness of the business's environmental management. Therefore, income from the sale of scrap such as stone, scrap iron, recycled plastic, or waste used for leveling should be fully recognized in environmental income instead of being ignored as before or separated from income from the consumption of main products. Identifying and classifying environmental income separately helps businesses be transparent in reflecting economic and environmental efficiency, and provides accurate information to stakeholders such as investors or management agencies. Environmental income should be clearly presented in the income statement to affirm the role of the business in recycling resources and reducing waste. At the same time, businesses should develop internal incentive mechanisms and cooperate with recycling partners to optimize this source of income, towards sustainable development and enhancing reputation in the market.

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