

# PROPOSED ACCOUNTING REPORT IN 3 DIMENSIONS ECONOMY - SOCIAL - ENVIRONMENT – SPECIAL CASE STUDY IN VIETNAM

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## Abstract

**Purpose** - The article presents the basic contents of accounting in three aspects: economy, society, environment; raised the need to provide information on environmental and social impacts from business activities. The article proposes the structure and method of setting up an environmental impact report, a case study at a clean food production enterprise.

**Methodology** - To carry out the article, we carry out 2 parts: (1) Surveying the objects to design the structure of the Environmental and Social Impact Report; (2) include the report form in the study in a specific case at a clean food processing enterprise. The report is built with data on 3 aspects: Economic (taken from the Income statement), social, environmental (estimated benefits and expenses).

**Finding** - The article proposes a form of reporting on social and environmental impacts from business activities. The article uses the report form after surveying to collect opinions from stakeholders, using this report form to implement in a specific situation at a clean food production enterprise.

**Practical implication** - The main structure of the social-environmental impact accounting report is built. Provide a way to make a social-environmental impact report according to the proposed form.

**Research limitations/implications:** Figures on the benefits and costs of environmental and social impacts from business activities are estimated.

**Practical implications** - Shows how to make a social and environmental impact accounting report, contributing to helping authorities obtain information on environmental and social impacts of enterprises and their internal decision making, enterprise.

**Social implications:** The article studies environmental and social aspects to help stakeholders see the benefits to society and the environment when businesses carry out activities that contribute to social development. society and protect the environment.

**Originality/value** - This article is unique because it shows how to report a business' socio-environmental impact using accounting data

**Keywords:** The triple bottom line accounting (TBL), Social and environmental impact accounting report (SEAR), environmental benefits, social benefits

**Paper type** Research paper

## 1. Introduction

We have known three-dimensional accounting (economic, social, environmental) to provide information about the society, environment, and business results of the enterprise for managers

and stakeholders and other related. The triple bottom line accounting (TBL) is a science of observing, measuring, calculating, recording, reflecting, organizing, processing, and analyzing information about the social responsibility that businesses commit to such as

the responsibility to protect the environment, responsibility to contribute to the social community, to suppliers, to employees, to ensure the interests and safety of consumers... They provide information in three dimensions is carried out to provide information to corporate administrators, state authorities, environmental management agencies, and relevant stakeholders such as employees, customers, suppliers, etc. authorities, associations, local territorial communities... Implementing TBL allows identifying, measuring, and allocating environmental and social costs related to business activities to help managers effectively management of enterprises from three angles. This method allows to identify products with larger environmental and social costs, and business profits are measured and calculated on this basis.

Traditional accounting refers to "profit" or "loss", on the Income Statement which only reflects revenue and expenses. Over the years, from the point of view of sustainability, environmentalists and social justices have struggled to give a broader definition of profit by introducing a full cost accounting perspective. For example, if a company is profitable for the year, but their asbestos mine causes thousands of deaths from lung disease, production waste pollutes a river, the government has to spend money from the budgets of these people to take care of health and clean up the river, so how do we perform a full social cost-benefit analysis? TBL will help businesses see the whole concept of profit.

To provide information to users, TBL will need to prepare an accounting report with data measured in terms of economic aspects (Income statement), social aspects, and environmental aspects. This paper proposes the presentation of social and environmental information on this 3-dimensional accounting. To complete the article, we conducted 2 parts: Surveying of managers, corporate finance directors, and some experts to design the structure of the report on environmental, social, and environmental impacts. We included the report form in the study of a specific case in a clean food processing enterprise. The report is built with data on 3 aspects: Economic (taken from the Income statement), social, environmental (estimated benefits and expenses).

## 2. Literature reviews

Sustainable development was introduced by the United Nations Brundtland Commission in 1987. The concept of sustainable development is closely related to economic, social, and environmental issues. The triple bottom accounting (TBL) extends the traditional reporting framework to reflect social and environmental performance in addition to financial performance.

In 1981, Freer Spreckley first put forth three key points about society, economy, and environment in a publication called "Social Auditing - Management Tools in Enterprises". In this work, he argues that businesses should measure and report on their financial performance, social sustainability, and environmental responsibility.

TBL was initiated by Elkington in 1994 in the Environmental Agenda towards Sustainable Development (Elkington, 2004). He used this phrase in his book *Cannibals with Fork* (Elkington, 1998), where he explained that TBL refers to three key points: economic prosperity, environmental quality, and social justice. This increases the need for information about the operations and financial position of businesses on the sustainability of their stakeholders.

According to Elkington: The three key points in manufacturing enterprises are based not only on the economic value that these businesses contribute but also on the environmental and social values as well as the destruction and degradation of the environment that these businesses contribute influence this business. TBL is reflected in the effective measurement and reporting frameworks through economic, social, and environmental parameters that businesses need to prepare. Therefore, sustainability is considered as an amalgamation of three areas of activity: economic, social, and environmental, which is seen as a necessary condition for the existence of modern corporations and businesses.

Financial statements according to 3-dimensional accounting, also known as corporate sustainability reports, include reports of financial and non-financial information for stakeholders, reports on risk management (Burchell). S, Clubb C and Hopwood AG, 2015). To show the impact of the business on the environment, manufacturing enterprises are encouraged to look at the overall picture to see

the impact of the business on the world around, the business will make a difference. damage to global resources, demonstrating transparency and social and environmental responsibility (Craig R and Amernic J, 2014).

Although there are many studies on the quantity and form of reporting social and environmental information, there are few studies on measuring the outcomes of social and environmental influences (Gray R, 2002). Questions like implementing environmental standards with an environmental management system to measure and report them to reduce emissions? Do labor standards improve workers' lives? What are the unintended consequences of adopting these standards? By focusing attention on measuring the economic, social, and environmental value created by an organization, questions can begin to be addressed. This is one of the purposes of social and environmental accounting (Hines RD, 2018).

Social accounting provides guidelines and tools for collecting, analyzing, and monitoring financial, social, and environmental data. Social accounting is more recent and flourished in the early 1970s. There are many definitions of social accounting, including the view that:

(1) Social accounting is the process of selecting variables of an enterprise's social performance, including measures, measurement procedures, and systematically developing information useful for evaluation of company's social performance; make such information available to relevant social groups, both inside and outside the business (Linowes D, 2012).

(2) Social accounting is the internal or external measurement and reporting of information regarding the impact of an entity and its activities on society (Linowes D, 2012).

(3) Social accounting is the process of reflecting the social and environmental impacts of an organization's economic activities on specific interest groups in society. It, therefore, involves extending the accountability of organizations (especially companies) beyond the traditional role of providing information to capital holders and especially shareholders.

(4) At least, social accounting means an extension of information presentation to non-traditional areas such as providing information about employees, products, community

services, and prevention or reduce pollution. However, the term "social accounting" is also used to describe a comprehensive form of accounting that takes into account external factors (Mathews MR., 2017).

What these definitions have in common is the expansion of a range of criteria considered when measuring performance and considering the organization about society and the environment. While traditional accounting focuses only on reporting financial items for economic decision-making, the focus on social accounting is broader than just financial items.

### 3. Theoretical framework of research

#### 3.1. The triple bottom line accounting effectively manages sustainable development in the business

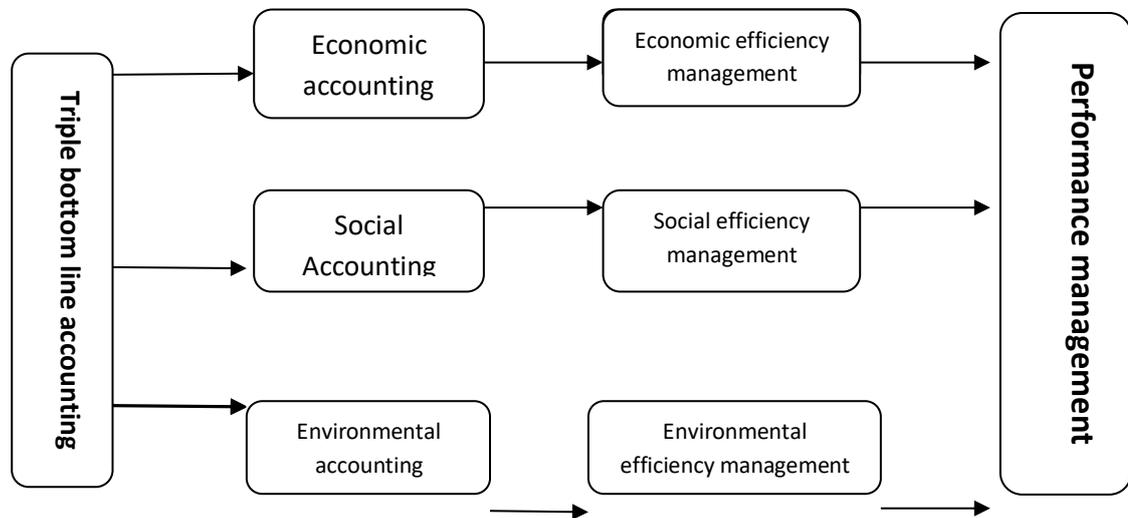
One of the functions of TBL is to reflect the performance of a business because efficiency is the goal of any organization (Gavrea, Ilies & Stegorean, 2011). Daft (2018) defined a business's performance or efficiency as its ability to achieve its goals by using resources efficiently. Lebars & Euske (2006), cited in Gavrea et al., (2011) introduced the concept of effectiveness as a set of financial and non-financial indicators that provide information about the degree of achievement of goals and results. Evaluation of financial performance is divided into two categories: (i) market-based (e.g. stock price, dividend payout, and earnings per share) and (ii) accounting-based performance. (e.g. return on assets (ROA) and return on equity (ROE)). In addition, Kaplan and Norton cited in Fauzi et al., 2010 provide extended measures of firm performance in the form of a balanced scorecard of financial and non-financial aspects of operations.

To specifically evaluate the relationship between 3 dimensions accounting systems and corporate sustainability, the following research questions were raised:

1. What is the relationship between three-way accounting and sustainable environmental performance?

2. What is the relationship between three-way accounting and sustainable social performance?

3. What is the relationship between three-way accounting and sustainable economic performance?



The research on 3-dimensional accounting shows:

1. The implementation of three-dimensional accounting in manufacturing enterprises will allow managers to determine environmental and social costs affecting the business;
2. The implementation of three-dimensional accounting allows managers to allocate environmental and social costs affecting the business;
3. The implementation of three-dimensional accounting allows managers to measure environmental and social costs affecting the business;
4. The implementation of three-dimensional accounting provides managers with strategies and techniques to manage economic, environmental, and social performance;
5. By identifying products with higher social and environmental costs, corporate profits can be measured and improved with caution;
6. The market share of enterprises can be improved by implementing three-dimensional accounting, which provides managers with the information needed to generate useful social and environmental reports for stakeholders. mandarin.

As the public becomes increasingly aware of the consequences of business activities that affect society and the environment, managers are forced to adopt and implement systems capable of identifying, allocating, and measuring the impact of their activities on their environment. From there, the findings and the relationship of TBL accounting with the sustainable performance of the enterprise were established.

### 3.2. Some measurement indicators of TBL

TBL with its core value of sustainability has gained traction in the business due to accumulating evidence of greater long-term profitability. For example, reducing waste from packaging can also reduce costs. Among the companies that exemplify these approaches are General Electric, Unilever, Proctor and Gamble, 3M, and Cascade Engineering. While these companies do not have an index-based TBL, one can see how they measure sustainability using the TBL concept. Some indicators to measure economic, social, and environmental performance are used to assess impacts from business activities, including: (Mathews MR., 2017): Amount of taxes paid (economy); Average hours of training/employee, from welfare to career retention, charitable contributions (society); safety incident rate, lost/restricted workday rate, sales dollars per

kilowatt- hours, greenhouse gas emissions, use of post-consumer and industrial recycled material, water consumption, amount of waste to landfill...(environment)

**3.3. Economic, social and environmental accounting report**

Building on previous social accounting models (Eg, Abt 1974, Belkaoui 1984, Estes 1976, Linowes 1972), Mook has developed several accounting models that integrate financial and social information to presents a more complete picture of an organization's performance (Mook 2004, Mook et al. 2002, 2003a, 2003b, 2004, Richmond and Mook 2001). One of these models is the Expanded Value Added Statement or EVAS, which is based on conventional

accounting statements but modified to reflect both social and environmental impacts. Value added is usually measured as the difference between the market value of goods or services produced and the cost of goods and services produced or purchased from other manufacturers. The concept of profit refers to wealth created for a group of owners and shareholders while added value is wealth created for a wider range of stakeholders (Llewelyn S, 2014). ). Thus, the Social and environmental impact accounting report (SEAR) focuses on the broader implications of an organization's activities beyond its profit or loss (Meek GK and Gray SJ, 2018). Figure 1 depicts the allocation of added value to stakeholders including both the enterprise and the external audience.

<b>Sales revenues</b>						
<b>Added value</b>						<b>Cost of products or goods purchased</b>
<b>Part paid to businesses and related parties</b>						
Workers	Investors, lenders	Machines, factories	Shareholder	Government	Enterprises	
Wages	Interest	Depreciation	Dividend	Tax	Retained earnings	

**Figure 1 – Allocation of added value**

One of the limitations of the traditional Income Statement is that it only focuses on economic (financial) results, not paying attention to the indirect impacts of the organization's activities on society and the environment. To overcome these limitations, TBL, value-added theories have been developed to incorporate social and environmental wealth reflections created or destroyed directly or indirectly

**4. Research methods and hypothesis**

To carry out the article, we performed 2 parts: Surveying objects to design the structure of the Environmental and Social Impact Report and putting the report form into the study in a

specific case at an enterprise. clean food processing.

We surveyed managers and CFOs of manufacturing enterprises in Vietnam to determine their views on whether a Social Environmental Impact Report should be issued, how useful usefulness of pieces of accounting information for decision-making internally and for users, outside of required financial statements. A questionnaire was used because it allowed us to capture the views of a larger number of participants and was more convenient to use as an online survey than an interview method. The results of the investigation give us the structure of the Social and Environmental Impact Report to use for research in a specific

case at a clean food processing and manufacturing enterprise.

We make the Social and Environmental Impact Report using assumed data at a clean food processing enterprise. The report is built with data on 3 aspects: Economic (taken from the Income statement), social, environmental (estimated benefits and expenses).

#### 4.1 Developing the questionnaire

The questionnaire used in this study was developed from various sources. The primary source is a review of the specific academic literature related to environmental accounting (Hyndman, 1990, 1991; Connolly and Hyndman, 2000, 2013a, b; Kilcullen et al., 2007; Hooper et al., 2008; Palmer, 2013; Connolly et al., 2013b; Ryan et al., 2014; Sinclair et al., 2014) to identify issues of concern for socio-environmental impact information. This was supplemented with a review of expert reports (eg, Flynn et al., 2000; CPA Australia, 2013).

The final questionnaire consists of two parts. The first part consisted of questions seeking participants' opinions on their preferred approach to the conceptual framework related to environmental and social information from a business-provided perspective; usefulness of different types of information to internal decision-making and to the decision-making of external general-purpose users of the report. The questions related to the conceptual framework ask respondents to indicate their level of agreement from 1 (strongly disagree) to 5 (strongly agree) with the contents as in Table 2. Respondents are also given the option to tick the uncertain box if they are unsure or do not understand the question. Questions regarding the provision of the Socio-Economic Impact Information Report asked participants to tick a box indicating their preferred approach. The options are shown in Table 3. For questions related to the usefulness of different types of socio-environmental information to internal decision-makers and users of the report for this purpose and external common goal. The participants were asked to choose on a scale of 1 (not helpful) to 5 (very helpful). The different pieces of information listed in Table 4 show how useful the information is for decision-making within their organization and decision-making by external users. Questions regarding internal decision-making were included in the

questionnaire for two reasons: (1) the report from the AASB (2017b) emphasized that the Accounting Standards Board was interested in identifying information useful to both internal and external stakeholders and, (2) likely that information deemed useful for internal decision-making will also be of interest to external stakeholders to facilitate the assessment of the accountability of the Board of Directors. The second part of the questionnaire asked for demographic data from respondents to facilitate a more detailed analysis of the responses. The questionnaire uses a combination of closed-ended and open-ended questions to provide answers about problems. Before distributing the questionnaires, the research team heard feedback from officials from the Ministry of Finance and the Accounting and Auditing Supervision Administration of Vietnam, as well as researchers with experience in the field of research. This resulted in some modifications to improve the relevancy of the questions.

#### 4.2 Research sample

The questionnaires were sent to several manufacturing enterprises in Vietnam. We target manufacturing businesses of the food processing category where their activities are likely to have a large impact on society and the environment. The enterprises sent to the questionnaire are listed companies on the Vietnamese stock market because: according to Vietnamese law, organizations listed on the stock market must prepare audited financial statements for compliance with the accounting standards of Vietnam and submit audited financial statements to the State Securities Commission of Vietnam. As a result, managers and financial statement preparers working for these businesses are more likely to be aware of the questions posed in this study. This was confirmed by officials from the Vietnam Auditing and Supervision Administration, who reviewed our questionnaire before conducting the study. They recommend that the managers and CFOs from our sample know the necessary to participate meaningfully in our questions.

Among 1345 large manufacturing enterprises that met the sample selection criteria, we selected 250 enterprises in the field of food production and processing. Of the 250 questionnaires mailed to managers and CFOs, 52 were returned due to incorrect addresses so the final sample size was 198. A total of 198

responses were received, representing a 79.2% response rate. Table 1 provides details on the overall sample and responses received, as well as by type of respondent (manager, CFO).

#### 4.3 Profile of respondents

Out of 198 responses, about 49.5% of respondents are managers and 48.5% are CFOs/Senior Accountants. The remaining 2% identify themselves as someone with a role related to accounting or finance. Approximately 58.8% of the total respondents (23.5% of managers and 35.3% of CFOs) are members of

a professional accounting organization (VACPA). Managers and CFOs have been in the accounting field for an average of 10-12 years and have an average of 11 years of management experience in the field. It can also be seen from Table 1 that a significant number of respondents have obtained a master's degree 25.3% for managers and 42.9% for CFOs, with a doctorate of 1% for managers, management and 5% for CFO. The above profile shows that respondents have sufficient knowledge of the field to be able to answer our questionnaire survey.

**Table 1**

	Managers	CFO/Senior Accountants	Total
<b>Panel A: Profile of respondents</b>			
Member of professional accounting association	35 (23,5%)	50 (35,3%)	85 (58,8%)
Average number of years of experience working in a processing enterprise	12 years	9.8 years	11 years
Number of years of work experience related to the preparation of accounting reports	5.6 years	8.5 years	7.4 years
<b>Panel B: Academic level</b>			
Bachelor's Degree	23%	2,5%	25,5%
Master's Degree	25,3%	42,9%	68,2%
Doctoral Degree	1%	5%	6%

In addition to our main analysis, we also conducted the supplementary analysis to see if there were any statistically significant differences between respondents based on their role (manager compared with CFO), whether they were members of a professional accounting association compared with those who were not, and whether respondents had prior for-profit sector experience. In the majority of instances, there were no statistically significant differences based on any of these dichotomies and as such we do not make mention of this in the following results section. However, whenever any statistically significant differences are found, these are explicitly mentioned in the discussion of our results.

## 5. Results and discussion of results

### 5.1 Conceptual framework

Responses to questions relating to the conceptual framework were recorded on a five-point Likert scale, ranging from [1] strongly disagree to [5] strongly agree. The results of these questions are presented in Table 2.

Initially, respondents were asked whether to apply accounting information disclosure from three perspectives: economic, social, and environmental? About 55% agree with this view, while 32% disagree. The responses were similar regardless of the respondent's role (manager or chief financial officer), whether they were members of a professional association of accountants or they had experienced in the manufacturing and processing sector or not. However, there are differing views on whether there should be a single conceptual framework that applies to all sectors, with 45.7% of respondents agreeing with this statement and 39% disagree. Additional analysis revealed a diversity of opinions based on respondents' previous management experience. Respondents' comments provide insight into differences in opinions. Advocates of a single conceptual framework (45.7%) seem to do so based on the belief that a common framework will promote the comparability of information across organizations and understanding.

Such remarks clearly show that there are distinct characteristics of different fields. Previous research (eg, Connolly and Hyndman, 2013a, b;

Ryan et al., 2014) suggests that 'accountability' is the purpose of financial reporting. We found that around 47% of respondents agreed that the main purpose of the regulation should be to support decision-making and not 'accountability', with another 32% voting for midpoint on the scale, and only 21.2% of respondents disagreed.

Our results are comparable to Crawford et al. (2014, 2018), who emphasized that most survey respondents, including board members and those preparing financial statements, support the use of financial statements for business purposes of economic decision making. These results illustrate the IASB's decision to remove accountability as a specific objective of financial reporting in 2010 and instead include it in the usefulness of the decision (Zeff et al., two thousand and thirteen). **5.2 Regulations in the accounting regime**

We also asked respondents about their preference for the application of accounting regulations on the provision of information on the Social and Environmental Impact Statement. Respondents were given four options, but asked to choose only one. The four options are: (i) The accounting rules for social and environmental disclosure apply equally to all for-profit sectors; (ii) There are accounting regulations on disclosure of social and environmental information that apply equally to all sectors, but additional regulations are issued for some specific industries in the for-profit sector; (iii) The accounting rules for environmental disclosure should not be applied to the nonprofit sector; and (iv) Certain regulated nonprofit sectors also require social and environmental disclosure regulations.

The results for this question are presented in Table 3. It can be seen that the two most preferred options focus on not applying environmental social disclosure to the nonprofit sector (37%), and there are accounting regulations on disclosure of social and environmental information that apply equally to all sectors, but additional regulations are issued for some specific industries in the for-profit sector (24.9 %). The comments received from respondents to this question provided significant insights into how they would choose to disclose accounting information about the entity's environmental and social impacts.

Table 2. Conceptual framework issues

Disagree (%)	Total				Managers				CFOs				Sig
	Disagree (%)	Agree (%)	Mean (SD)	Median	Disagree (%)	Agree (%)	Mean (SD)	Median	Disagree (%)	Agree (%)	Mean (SD)	Median	
a. The approach to disclosure of accounting information in 3 aspects is appropriate	32	55.4	3.45 (1.33)	4	34	50.5	3.36 (1.33)	4	30.1	59.3	3.51 (1.32)	4	0.410
b. There should be a single presentation of information that is equally applicable for all fields	39	45.7	3.18 (1.40)	3	39.6	46.5	3.18 (1.46)	3	38.9	45.4	3.17 (1.36)	3	0.954
c. For the purposes of reports on social and environmental information, there is no need to state "accountability" but mainly for "decision making" purposes.	21.2	46.6	3.32 (1.09)	3	15.1	43.4	3.41 (0.94)	3	25.9	49.1	3.22 (1.20)	3	0.531
d. Social and environmental information should be measured according to quantitative criteria and explained in detail in the notes	18.2	32	2.32 (1.05)	3	14	32	2.41 (0.74)	3	15.9	29.4	2.22 (1.03)	2	0.43
Wilcoxon sign-ranked test	Sig				Sig				Sig				
a vs. b	0.003				0.161				0.011				
a vs. c	0.000				0.000				0.014				

a vs. d	0.432				0.507				0.151				
b vs. c	0.000				0.000				0.000				
b vs. d	0.137				0.079				0.689				
c vs. d	0.000				0.000				0.000				

CFOs, CFOs; SD, standard deviation; Sign, meaning. Scale: [1] strongly disagree - [5] strongly agree. In this table, 'Disagree' represents those who answered 1 or 2 on the response scale; 'Agree' represents people who answered 4 or 5 on the response scale. We used

the term 'industry neutral' to enhance the understanding of our questions for participants because it was based on discussions with members of the Accounting and Auditing Oversight Administration. and researchers.

**Table 3. Preferred options for accounting regulations**

	Total (%)	Managers (%)	CFOs (%)
a. The accounting rules for social and environmental disclosure apply equally to all for-profit sectors.	18.3	17.4	19.8
b. There are accounting regulations on disclosure of social and environmental information that apply equally to all sectors, but additional regulations are issued for some specific industries in the for-profit sector.	24.9	28.4	21.5
c. The accounting rules for environmental disclosure should not be applied to the nonprofit sector	37	33.8	41.5
d. Certain regulated nonprofit sectors also require social and environmental disclosure regulations	19.8	20.4	17.2

### 5.3 Useful information for internal decision-making

The above results show that the respondents are very interested in the specific contents of the enterprise's social and environmental impact information.

Table 4 presents the results on the usefulness of social and environmental impact information for decision making. The specific targets are as follows:

- Normal revenue and expense (97.9 percent of agreed that this item was useful)

- Specific indicators on social and environmental benefits (94.5 percent)
- Specific indicators on costs related to society and the environment (92.1 percent)
- Value added from normal business activities (91.8 percent)
- The added value of activities promoting social progress and environmental protection (91.0 percent)

Although the majority of respondents agree that all the information items presented in Table 4 are useful for internal decision-making.

However, there are two indicators Value added from normal business activities and The added value of activities promoting social progress and

environmental protection. Most of the respondents disagreed with information disclosure.

**Table 4. The usefulness of information for decision making**

	Total				Managers				CFOs			Sig	
	Disagree (%)	Agree (%)	Mean (SD)	Median	Disagree (%)	Agree (%)	Mean (SD)	Median	Disagree (%)	Agree (%)	Mean (SD)	Median	Managers vs. CFOs
Normal revenue and expense	0	97.9	4.84 (0.42)	5	0	96.4	4.8 (0.48)	5	0	99.2	4.86 (0.37)	5	0.475
Specific indicators on social and environmental benefits	0.8	94.5	4.72 (0.59)	5	0.9	93.9	4.66 (0.62)	5	0.8	95	4.78 (0.56)	5	0.089
Specific indicators on costs related to society and the environment	1.6	92.1	4.65 (0.69)	5	1.8	93	4.64 (0.67)	5	1.6	91	4.64 (0.73)	5	0.712
Value-added from normal business activities	2.2	91.8	4.60 (0.74)	5	3.8	87.1	4.44 (0.88)	5	0.8	95.8	4.73 (0.56)	5	0.007
The added value of activities promoting social progress and environmental protection	3	91	4.59 (0.77)	5	4.7	86.1	4.44 (0.91)	5	1.7	94.9	4.71 (0.62)	5	0.023
Revenues disclosed by program/ segment	72.2	21.8	4.60 (0.74)	5	63.8	27.1	4.44 (0.88)	5	60.8	25.8	4.73 (0.56)	5	0.007
Expenses disclosed by program/ segment	73	21	4.59 (0.77)	5	64.7	26.1	4.44 (0.91)	5	51.7	34.9	4.71 (0.62)	5	0.023

## 6. Case study of clean food production

### 6.1. Describe the situation

Clean food products have many impacts on human health and environmental pollution, from the use of inputs, technological innovation, and science that are beneficial to the environment to the promotion of relationships, equity, and quality of life for consumers. Today, in Vietnam, the food manufacturing industry has paid much attention to environmental and social

impacts by limiting the use of input materials such as chemicals for coloring, flavoring, product shapes, preservatives, additives, and radioactive substances for their food products.

The basic principles for producing clean food products in Vietnam are:

\* **Health:** products need to maintain and increase human health. The health of individuals and communities cannot be separated from the health of ecosystems.

\* **Ecology:** Products rely on living ecosystems and their natural cycles to work and maintain them. It shows that production must be based on ecological and regenerative processes. To obtain food and good health must go through the ecology of the specific production environment. For example, for plants, a living soil environment is required, for domestic animals, a farm ecosystem is required, and for fish and marine organisms, an aquatic environment.

\* **Fairness:** The product should be built on a relationship that ensures fairness along with consideration for the common environment and life opportunities for all living things. Equity is described as the harmony reason, respect, honesty, and devotion towards people and also with the relationships of life

**Table 5. Differences between clean production methods and conventional production methods**

Criteria	Clean product	Ordinary product
Land	- Zoned and cultivated away from an appropriate buffer zone to protect against the risk of external contamination. - The soil is tested to ensure that it is not contaminated by heavy metals and other harmful chemicals	It is planned as an area, can be sampled by local authorities for testing
Water	Tested to ensure that the water source meets production standards	Only authorized agencies take samples for testing when necessary cần
Nutrition	Fertilizers, chemicals, growth promoters and genetically modified products are not allowed.	Only permitted and controlled production inputs are used. Fertilizers, feeds with growth stimulants are used
Productivity	Less than or equal to conventional production	High productivity
Product quality	Product quality is good, safe for consumers, limiting environmental pollution	Product quality is at an acceptable level, not taking into account social and environmental impacts

Source: Vietnamorganic.vn

To illustrate the possibilities of environmental sustainability reporting, we study a specific example. The purpose of this case study is to show how information reporting combines social and environmental information, thereby presenting a larger picture of the organization than conventional accounting reports. The purpose of this example is to present an alternative accounting model that can reflect external factors to see how social and environmental influences affect business performance.

In Vietnam, the assessment of clean food products is based on the following criteria:

1. Grown on clean land
2. Use clean water
3. Save energy, use natural energy

4. Use renewable materials and resources
5. Minimizing the impact on the environment from waste
6. The production process is innovated and designed reasonably, saving costs

Clean production has great potential to make a significant impact on sustainability, especially with the three areas of consumption of water, energy, and other resources; waste and emissions; cause disease in humans and affect health.

According to King AA and Lenox MJ (2000), clean production brings customers many benefits related to health and other social benefits, reducing waste and waste disposal costs and costs. other environmental fees. Table 6 is built based on estimates of Environmental

benefits and Social benefits from producing clean food compared to conventional products.

## 6.2. Comparative figures of clean production and traditional production

**Table 6- Benefits from producing a clean food product**

<b>Benefits</b>	<b>Value/1 product</b>
1. Environmental benefits	<b>\$1.61</b>
- Environmentally friendly materials	\$0.57
- Reduce resource consumption	\$0.12
- Water value	\$0,02
- Less waste, use renewable energy	\$0,05
- Other	\$0.85
2. Social benefits	<b>\$ 3.52</b>
- Safe for consumers' health	\$2.7
- Meet the needs of consumers clean products	\$0.3
- In line with the country's policy, social development	\$0.25
- Other	\$0.27
3. Total benefits of producing a clean food product	<b>\$5.13</b>

**Table 7 - Cost of traditional products and clean products**

<b>Items</b>	<b>Cost/Volume</b>
1. Number of products produced	<b>16.000 units</b>
2. Traditional unit cost (excluding wage and depreciation expenses)	\$30.7
3. Total traditional cost (excluding wage and depreciation expenses) (1)x(2)	\$491 200
4. Extra costs to produce clean products/1 product	\$0.5
5. Unit production cost if produced cleanly ((excluding wage and depreciation expenses) (2)+(4)	\$31.2
6. Total cost for clean product (excluding wage and depreciation expenses) (1)x(5)	\$499 200

From the above data, we will make an Income statement for 2 cases: Classical production and sustainable clean production with a production volume of 16,000 products. The case of clean and sustainable production requires businesses to use materials that are safe for consumers' health, environmentally friendly, without preservatives, following the economic development policy of the region. Wages and

depreciation costs remain the same in both cases. These requirements require an incremental cost of \$0.5 per unit of product, so the total cost for the traditional production case is \$491 200 and the clean production case is \$499 200 (excluding wage and depreciation expenses). The unit selling price for traditional produce is \$54.2, for clean produce, it is \$54.8.

### 6.3. Income statement và Social Income statement environmental impact report

**Table 8 – Income statement (16 000 products)**

	Traditional production (\$)	Clean production (\$)
<b>1. Revenu</b>	<b>867 200</b>	<b>876 800</b>
<b>2. Expense</b>	<b>666 800</b>	<b>674 800</b>
- Cost of product sold (excluding wage and depreciation expenses)	491 200	499 200
- Wages	162 000	162 000
- Depreciation	13 600	13 600
<b>3. Benefit before taxes</b>	<b>200 400</b>	<b>202 000</b>
<b>4. Income taxes</b>	<b>40 080</b>	<b>40 400</b>
<b>5. Benefit after taxes</b>	<b>160 320</b>	<b>161 600</b>

However, the Income statement above has not yet reflected the social and environmental impacts of clean and sustainable production.

#### Social environmental impact report

To prepare an Environmental and Social Impact Report, we need to consider both direct and indirect outputs and impacts from business

activities. The figures present concretize the added value created from different objects such as employees and businesses, to whom they are distributed. This can be considered as the clearest evidence for the origin of the enterprise's added value as well as the environmental and social impacts from the products that businesses create due to clean production.

**Table 9 - Social environmental impact report**

	Report economic (1)	Report social (2)	Report environmental (3)	Total (4)
<b>Direct outputs</b>	Revenues from sales	876 800		876 800
<b>Indirect output</b>	Safe for consumers' health		43 200	43 200
	Meet the needs of consumers clean products		4 800	4 800
	In line with the country's policy, social development		4 000	4 000
	Other social		4 320	4 320

	Environmentally friendly materials			9 120	9 120
	Reduce resource consumption			1 920	1 920
	Water value			320	320
	Less waste, use renewable energy			800	800
	Other environmental			13 600	13 600
<b>Total outputs</b>			56 320	25 760	958 880
<b>Total cost for clean product (CFCP) (excluding wage and depreciation expenses) (5)</b>		499 200			499 200
<b>Value Added Created (VAD)</b>		<b>377 600</b>	<b>56 320</b>	<b>25 760</b>	<b>459 680</b>
Ratio of VAD/CFCP)(6)		76%	11%	5%	92%
Distribution of added value					
Employees		162 000			
Enterprises	Depreciation	13 600			
	Benefits	161 600			
Government		40 400			
Society (including customers)			56 320		
Environment				25 760	
<b>Distribution of added value</b>		<b>377 600</b>	<b>56 320</b>	<b>25 760</b>	<b>459 680</b>

(1): Table 8 (Column "Clean production")

(2): Table 6 (Section "Social benefits") x 16 000 products

(3) Table 6 (Section "Environmental benefits") x 16 000 products

(4): Total of (1), (2), (3)

(5): Table 7

### Value Added Created

We all know that Value Added Created is a measure of the wealth an organization creates by "adding value" to raw materials, products and services through the use of labor and capital. In table 9, to calculate the Value Added Created, the first step is to define the direct outputs "Revenues from sales" which are calculated as the unit selling price in the case of clean

production and the number of manufactured products sold (\$876 800). In addition, the indirect output is determined by the figures in Table 6 multiplied by the number of products sold (16 000 products): Figures are quoted line by line for Social Benefits and Environmental Benefits. We continue to calculate Value Added Created for 3 parts: Report economic (Extracted from Income Statement), Report social, Report environmental, and the total (\$459 680). The next part is to allocate Value Added Created to objects: Employees, Enterprise, Government, Society, Environment.

The ratio of VAD/CFCP is calculated by dividing the value added by the cost of external goods and services. This indicates that for every dollar spent on goods and services, the organization generated \$0.92 in value-added. The Social and Environmental Impact Report

shows more future estimates of items such as consumer safety, meeting consumer demand for clean products, in line with development policy Economic development of the country, environmentally friendly materials, reduced consumption of resources, reduced waste... Without clean production, the rate of added value is only 76%

### **Distribution of added value**

The added value created by the organization is fully distributed to the stakeholders based on their contribution to the viability of the organization and its values. Stakeholders are typically employees, government, investors, and the organization itself. For the Social and Environmental Impact Report, additional stakeholders are customers, social and environmental benefits. Value-added distribution metrics for objects are presented as shown in Table 9.

## **7. Discussion and conclusion**

The socio-environmental impact report shows that the financial information on the Income Statement does not reflect the entire operation of the business and the effects of its activities. The social and environmental impact report can be said to be an integrated report to reflect the impact of the business on the stakeholders, the role of the business in creating added value in all aspects economic, social and environmental. This study also has limitations due to the estimation of social and environmental benefits generated. Therefore, the identification, measurement, and quantification to determine the environmental and social benefit values is an issue that can be further studied with the performance of sustainable development. In addition to estimating social and environmental benefits, the additional costs of clean and sustainable production also estimate that should be measured with caution (Bennett et al. 2002, 2003, Richardsson et al. associates. 2005). The presentation on all three levels: economic, social, and environmental, shows a more complete picture of the business's performance. This shows that accounting is the guiding tool for businesses to develop sustainably.

Disclosure of social and environmental impact information (DSEI) for sustainable development becomes the best tool for businesses to understand and manage the potential

relationships between traditional economic goals and environmental social goals. The implementation of disclosure of social and environmental impact information may depend on the legal system, the qualifications of the accountant, the characteristics of the business. From there, it can be considered that disclosure of social and environmental impact information is an important element of resource efficiency for companies. Therefore, DSEI depends on the company's strategy, the level of clean and sustainable production, and the views of its leaders and shareholders.

Through survey research from 198 subjects of managers, CFOs, and accounting experts, it is found that: The appropriate social and environmental impact report template can show all 3 contents: economic data from The Income statement), social and environmental (estimated data on benefits and costs). The report also needs to indicate Value-added created to see the impact of business activities on society and the environment, so that both sides can be seen: positive and negative impacts of business activities. to society and the environment.

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